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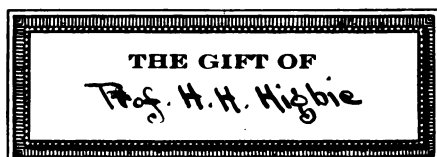
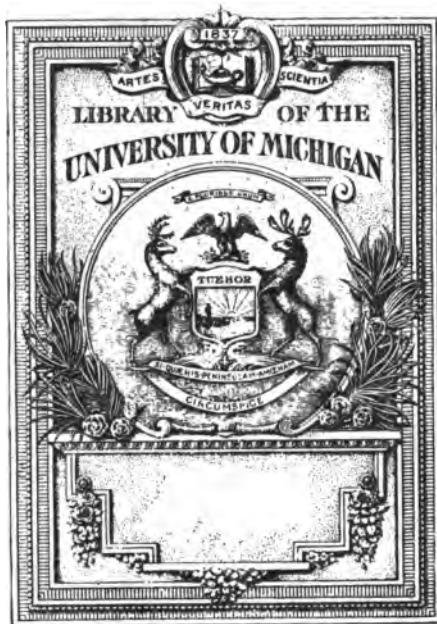
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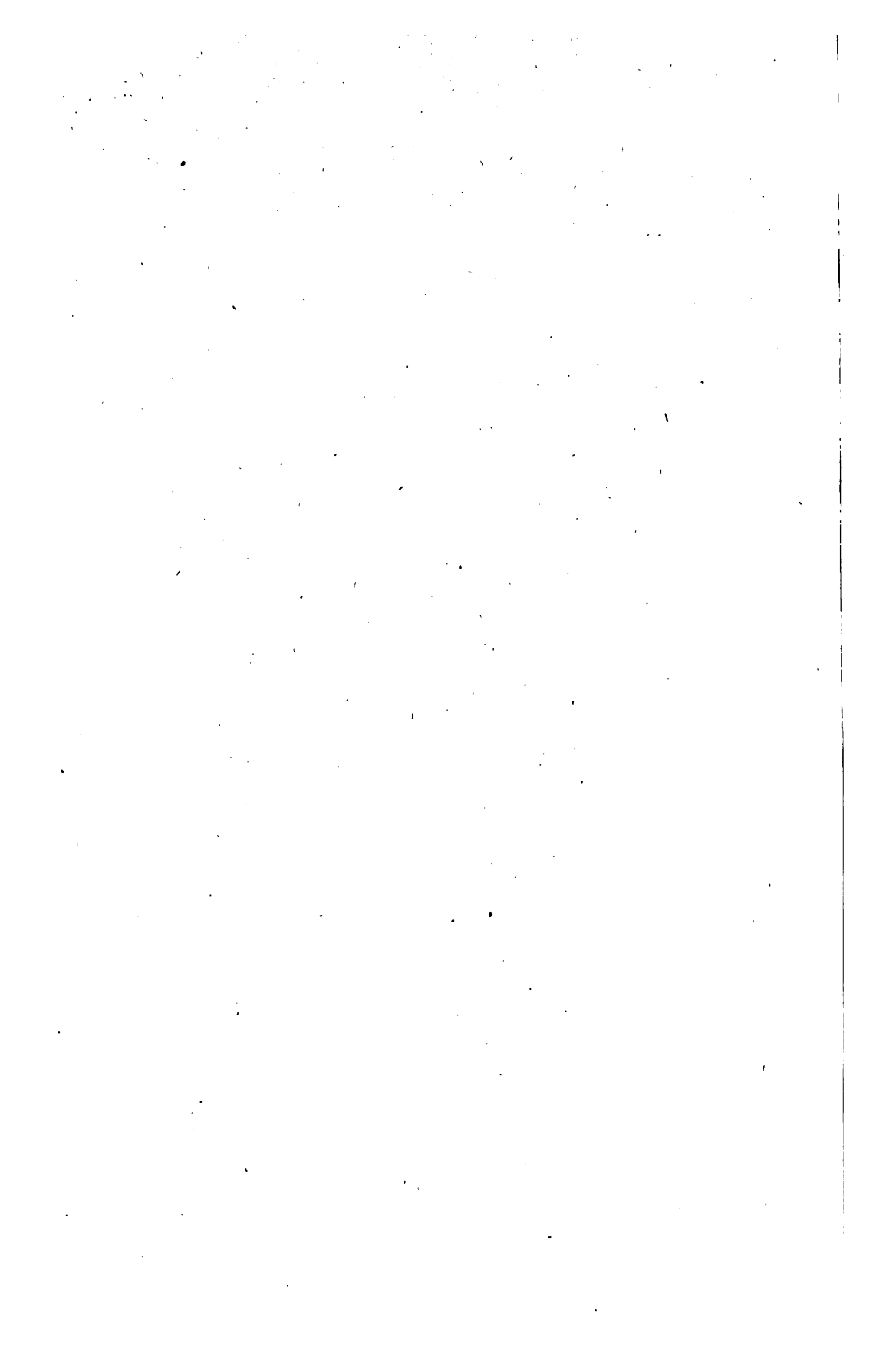
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SECOND ANNUAL MESSAGE
OF
EDWIN H. FITLER,
Mayor of the City of Philadelphia,
WITH
ANNUAL REPORT
OF
WILLIAM S. STOKLEY,
Director of the Department of Public Safety,
AND
ANNUAL REPORT
OF THE
ELECTRICAL BUREAU
FOR THE
Year ending December 31, 1888,
ISSUED BY THE
CITY OF PHILADELPHIA, 1889.

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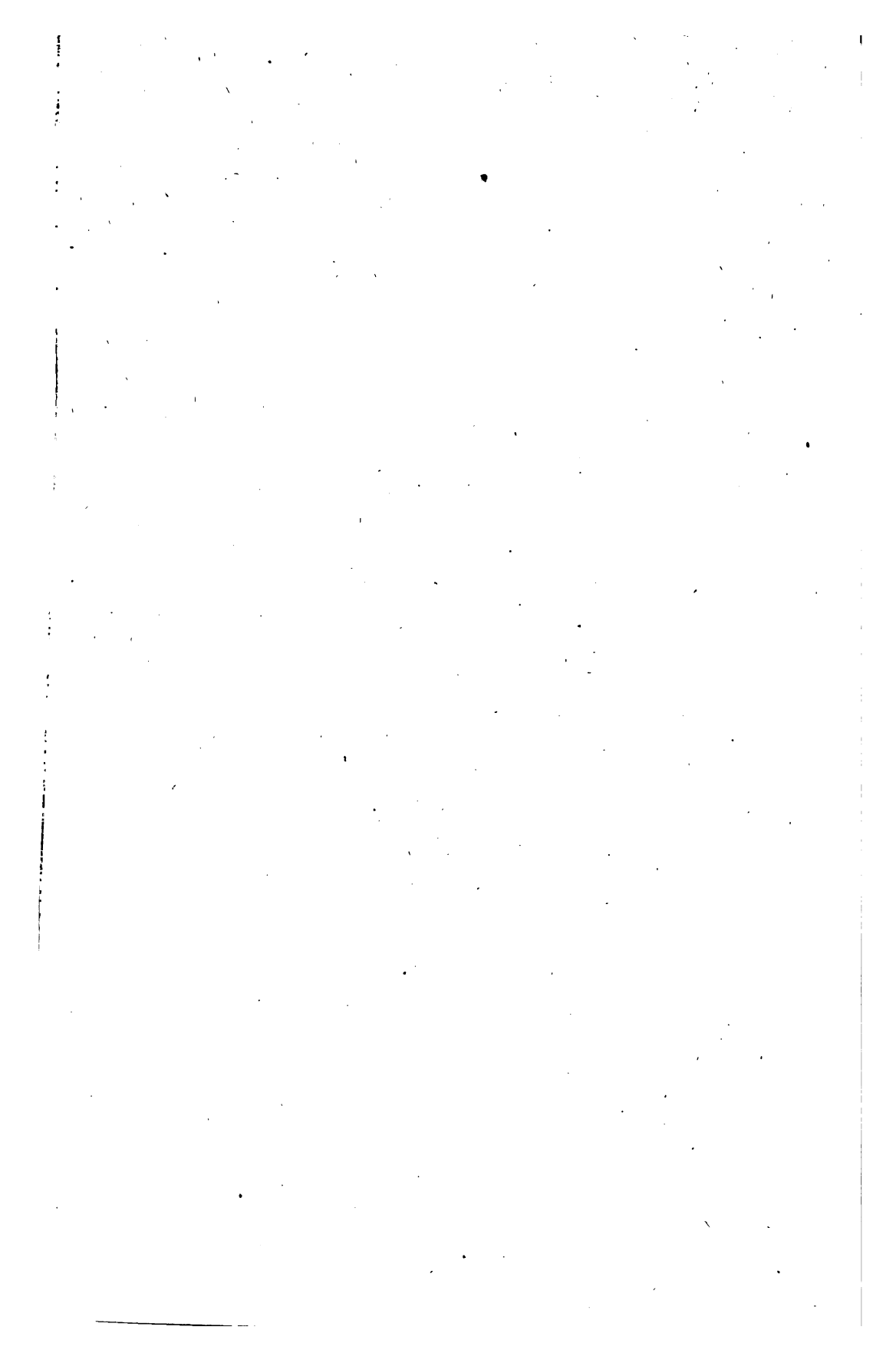
OFFICERS
OF THE
DEPARTMENT OF PUBLIC SAFETY.

DIRECTOR,
WILLIAM S. STOKLEY.

Secretary,
JOSEPH F. MARCER.

Bookkeeper,
HIRAM HORTER, JR.

Messenger,
JOSEPH A. LYBRAND.



SECOND ANNUAL MESSAGE.

MAYOR'S OFFICE.

Philadelphia, April 1, 1889.

To the Select and Common Councils
of the City of Philadelphia.

GENTLEMEN:—The Act of Assembly approved June 1, 1885, makes it the duty of the Mayor:

I.—To cause the ordinances of the city and the laws of the State to be executed and enforced.

II.—To communicate to Councils, at least once a year, a statement of the finances and general condition of the affairs of the city, and also such information in relation to the same, as either branch of Councils may from time to time require.

III.—To recommend by message in writing to the Councils all such measures connected with the affairs of the city, and the protection and improvement of its government and finances, as he shall deem expedient.

In conformity thereto, my Second Annual Message is herewith presented for the consideration of your Honorable Bodies.

The ordinances of the city, and the laws of the Commonwealth, in so far as they apply to the City of Philadelphia, have been enforced with conscientious fidelity by all of the Executive Departments of the city.

Finances.

There probably never was a period in the history of our city when its finances were in a condition so gratifying as they are at the present time.

On the first of January, 1889, the funded debt amounted to fifty-seven million one hundred and forty-six thousand and ninety-five (57,146,095) dollars and twenty-two (22) cents, a decrease of eight hundred and twenty-one thousand three hundred (821,300) dollars since the first day of January, 1888. The assets of the city, consisting of railroad stock, City, State, and United States bonds, outstanding taxes, securities, and cash, amounted to thirty million seven hundred and seven thousand seven hundred and eighty (30,707,780) dollars and ninety-seven (97) cents, on the first day of January of this year, and in addition to this the city is the owner of real estate, the appraised value of which by the Board of Revision of Taxes, is forty-two million nine hundred and forty-six thousand three hundred and forty-four (42,946,344) dollars.

The total receipts from all sources during the year 1888, amounted to nineteen million six hundred and seventy-two thousand one hundred and ninety (19,672,190) dollars and fifty-four (54) cents, an increase of two million eighty-seven thousand nine hundred and thirty-four (2,087,934) dollars and eighty (80) cents, over the total receipts for the year 1887. The total disbursements during the year 1888 amounted to nineteen million seven hundred and eleven thousand two hundred and seventy (19,711,270) dollars and sixty-six (66) cents, an increase of two million seventy-two thousand nine hundred and sixty-six (2,072,966) dollars and sixty-one (61) cents over the expenditures for the year 1887, and which was applied mainly for the purpose of making permanent improvements.

Your attention was invited in my message of a year ago to the question of refunding the loans of the city at a lower rate of interest, but as no action has yet been taken by Councils in that direction, the matter is once more brought to your consideration, in the hope that such legislation may be enacted at an early day, as will result in bringing about a reduction of the city's liabilities for Sinking Fund account and interest.

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It is believed that should this recommendation meet with the approval of your Honorable Bodies the result would be an annual saving of nearly one and a half million (1,500,000) dollars.

DEPARTMENTS.

PUBLIC SAFETY.

The improvements which marked the management of the Department of Public Safety, under Director Stokley's energetic control, have continued, and a still higher standard of discipline and effectiveness has been obtained, and the statement can be safely made that at no time in the city's history were the police force so vigilant and the fire service of the city more effective in the performance of their duties than now.

No great robberies occurred during the year, and while some petty burglaries were committed in the rural sections of the city, yet the prompt arrest, conviction and punishment of a number of such thieves attest the efficiency of the police service, and it has also taught the vicious that they cannot ply their criminal vocation with impunity, even in the more sparsely settled portions of the city.

The Bureau Reports made to the Director of Public Safety are herewith transmitted; they are official documents of great interest, showing the workings in detail of each Bureau, and it is hoped that the recommendations made by the Director may receive the consideration their importance merits.

PUBLIC WORKS.

The Director of the Department of Public Works is charged not only with the grave responsibility of the supply and distribution of water and gas; the grading, paving, repairing, cleaning, and lighting of streets and alleys; the construction, protection and repair of bridges, sewers, and drainage, and with the engineering and surveying of the city; but, being a money earning Department, it is a duty the Director owes to

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the public to so manage its affairs as to cause the revenues imposed by law, and exacted by the Bureaus of his Department, to be borne as willingly by the tax-payers as possible.

That result is always difficult to obtain, and if reached at all, it can only be secured by rendering to the public a full and honest service in every particular. How well Director Wagner has succeeded in meeting the properly exacting demands of the citizens and tax-payers, can only be determined from a careful consideration of his exhaustive and highly interesting report of the operations of his Department for the year.

Some idea of what is being done by the Department of Public Works may be formed from these figures taken from the Director's Annual Report:

Thirty-nine and a half ($39\frac{1}{2}$) miles of gas pipes laid during the year 1888, making the total length now in use nine hundred and seventeen (917) miles.

The erection of a new gas-holder of two hundred thousand (200,000) cubic feet capacity.

The laying of four hundred and forty-five thousand three hundred and sixty-nine (445,369) square yards, or 152,217 linear feet, equal to twenty-eight (28) miles 4.378 linear feet of granite, asphalt, vitrified brick, and macadam pavements during the year 1888, as against one hundred and fifty-three thousand nine hundred and three (153,903) square yards, or 53,839 linear feet, equal to ten (10) miles 1,039 linear feet during the year 1887. Grading done, two hundred and thirteen thousand four hundred and seventy-seven (213,477) cubic yards, as against one hundred and thirty-nine thousand four hundred and fifty (139,450) cubic yards in 1887. Linear feet of curbing reset, one hundred and sixty-two thousand seven hundred and ninety-eight (162,798), as against seven thousand five hundred and one (7,501) feet during 1887; and notwithstanding the great increase in the amount of work done, the expenditures in the Bureau of Highways for 1888 were one hundred and fifteen thousand six hundred and twenty-one (115,621) dollars less than for 1887.

More work was done by the Bureau of Surveys than in any other year since it was organized, and its devotion to the public service is fairly attested by the fact that during the year 1888, it constructed about thirty-three (33) miles of sewers, as against twenty-two and one-half ($22\frac{1}{2}$) miles in 1887.

The erection of a subsiding reservoir of three hundred and six million (306,000,000) gallons capacity; the laying of twenty-five (25) miles, 1,552 linear feet of water pipe, and the placing in position of seven hundred and forty-six new style fire-hydrants serve to fairly indicate the energy of the Bureau of Water.

The recommendations made to me by the Director of Public Works are deserving of your careful consideration. They are the result of the mature deliberation of an officer skilled in the public affairs of the city, who has made each suggestion a matter of close study and personal examination, and are forwarded to your Honorable Bodies with my earnest approval.

CHARITIES AND CORRECTION.

The report of the President and Directors of the Department of Charities and Correction presents a gratifying exhibit of the institutions under their charge.

The Philadelphia Hospital, the most important of the several institutions under their control, has received that systematic and thorough supervision to which it is entitled, and it is to-day recognized not only as the oldest and one of the largest, but as one of the best on the Continent. Its Training School for Nurses has won a National reputation, so that its graduates have been selected as Superintendents of similar institutions in various parts of the country. The testimony of prominent members of the Medical Staff of the Hospital is to the effect that under the present management an efficiency of service has been attained as gratifying to them as it is beneficent to those who require the service.

The overcrowded condition of the Hospital—the one thing which more than anything else interfered with its efficiency—

is happily in the near future to be remedied by the building of a new Almshouse and the removal of the pauper element, thus affording the additional room which will enable this Department to make the Philadelphia Hospital an honor and a pride to the City of Philadelphia.

The plans for the new buildings to be erected for the accommodation of the Almshouse population will provide for a better classification of the inmates than has heretofore been possible. A series of buildings is contemplated thus affording in this respect and in many others great advantages over a single structure.

In connection with the House of Correction, the Report calls attention to two subjects which deserve the careful consideration of Councils. First:—The statement that the limit of gas production has been reached by the existing plant. If the large and rapidly increasing population in the vicinity is to be supplied from the House of Correction Works, provision should be made to meet the demand. Second:—The imperfect system of drainage of the House is a menace to the health of the inmates of the institution and provisions should promptly be made to remedy it.

Many much-needed improvements have been made by the Board in its several departments, for the details of which, and for suggestions of value, I refer you with gratification to the Report itself, which contains evidence of an intelligent and thoughtful administration of affairs, inspiring confidence in the successful working of the New City Charter, in reference to one of the most complex problems of municipal government.

In addition to the foregoing, the Reports of

The Department of Receiver of Taxes,

The Department of City Treasurer,

The Department of City Controller,

The Department of Law,

The Department of Education, and

The Sinking Fund Commission,

are herewith transmitted for your consideration.

During the two years of my term as Mayor, it has been my constant and earnest endeavor to afford the amplest protection to life and property; to improve the condition of the water supply; to greatly improve our badly paved streets, and to promote their cleanliness; to better the quality of illuminating gas, and to cheapen the cost of its production; to secure the removal of the Almshouse from its present location; and for the construction of a bridge over the Schuylkill river, at Walnut street.

It gives me pleasure to be able to say, that a careful survey of the work already done warrants the statement that with the exception of the cancellation of the interest bearing bonds in the Sinking Fund, and a refunding of the bonded debt, all the other aims and purposes indicated have, owing to your kind co-operation, either been secured, or are likely to be within a reasonable time.

The rights and privileges granted to corporations to use streets of the City for electrical, and for steam or other artificial heating purposes, etc., are certainly valuable franchises, profitable to those concerned in them, and they should be made to yield a large revenue to the city, in the form of a license fee or otherwise; it remains for you to so legislate that such a revenue may be secured.

The City owns a large amount of vacant land that could be sold to great advantage at this time, and made to yield not only a large amount in principal, but in taxes, after it is improved. It has been represented to me that there are over fifty (50) acres located in the Twenty-second Ward, and even more than that in the Twenty-fourth Ward, and much of it desirable for improvements, especially that portion on Bryn Mawr and Boundary Avenues, near George's Hill. I respectfully submit this suggestion for your consideration.

A portion of the Almshouse ground lying along the west bank of the Schuylkill, and below South street, has been set apart by your Honorable Bodies, several years ago, for use as a Public Park. Its early completion as a pleasure ground is

due to the large number of citizens residing on both sides of the river, and particularly to those in the closely built up wards east of the Schuylkill. A commencement of this work should be made at once by the construction of a retaining wall along the river front; the stone for same could be quarried, and the wall erected, by inmates of the House of Correction. For this important matter, I respectfully ask your early attention.

One of the most serious problems to be solved by your Honorable Bodies is that of abolishing grade crossings, restricting traffic on surface tracks and furnishing better terminal facilities for the traveling public. This is a vital and pressing question, and should be met as promptly as possible, in a spirit of equity and justice to all parties concerned.

While the rights of the city and of interested property owners must be guarded and protected, yet the interests of trade and commerce and the general welfare require that whatever action shall be taken in the matter must not be detrimental to our manufacturing interests, nor to the railroad companies.

The rapid growth and development of our city, the competition in trade and commerce, and the exacting demands upon the time of business men require the most rapid transit possible from the business centre of the city to other trade centres.

A terminal station at Twelfth and Market streets for the Philadelphia and Reading Railroad system; the elevation of their tracks on Pennsylvania avenue, on Willow street, and on Ninth street, is a question that the prosperity of the city, the public good, and the absolute requirements of the Railroad Company demand shall be met in a spirit of fairness and with intelligence. As we cannot escape its consideration even if we would, let us therefore meet it as becomes the representatives of a great and growing city.

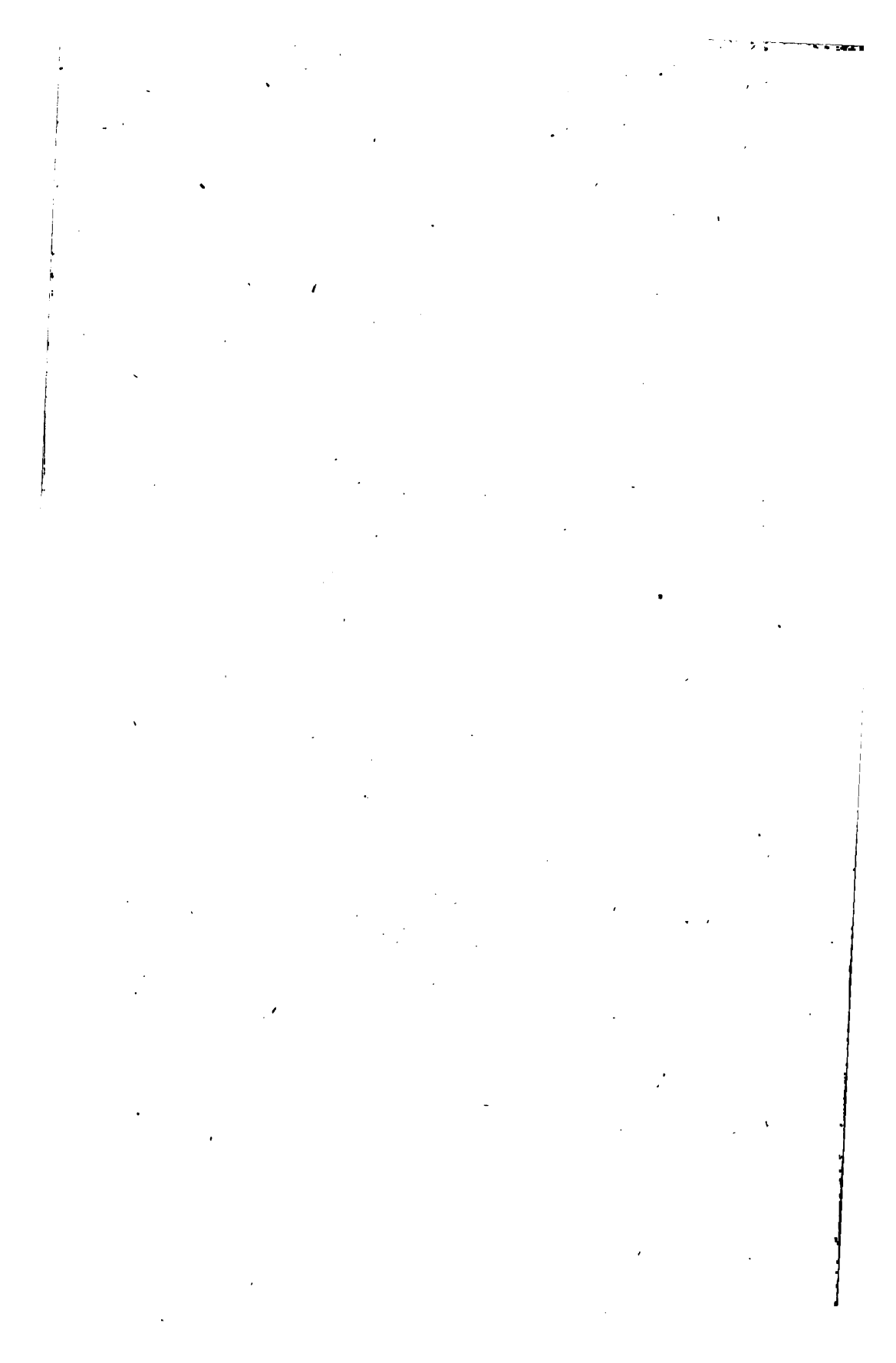
In conclusion, permit me to say, that your assistance has been freely given, and almost without question in all affairs

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relating to the municipality during the two years of my term as its Chief Magistrate. For the trust and confidence thus reposed in me, you have my gratitude, and it is my sincere hope that the pleasant relations existing between us, personal as well official, may continue to the end, and I earnestly invoke your further co-operation in my efforts to promote the general welfare, by endeavoring to maintain an honest and faithful administration of public affairs.

I am, respectfully,

EDWIN H. FITLER,
Mayor.



REPORT OF THE DIRECTOR OF THE DEPARTMENT OF PUBLIC SAFETY.

WILLIAM S. STOKLEY, Director.

Philadelphia, January 28, 1889.

HON. EDWIN H. FITLER,
Mayor of the City of Philadelphia.

SIR:—As directed by the several Acts of Assembly of the Commonwealth of Pennsylvania relating to the government of this Municipality, I submit to your Honor a report of the operations of the several Bureaus under my direction and supervision as Director of the Department of Public Safety, for the year 1888.

The following tabular statement showing the amounts appropriated to each of the several Bureaus, together with the expenditures, the amounts merging and not merging on the 31st day of December, the close of the fiscal year, viz. :

	Appropriations.	Expended.	Special. Not merging.	Merging.
Department of Public Safety.....	\$12,321 25	\$12,321 25		
Bureau of Police:				
Bal. of app'n from 1887.....\$8,547 21				
Appropri'n for 1888.....1,751,710 08				
Special appropri'n 1888.....47,753 84				
Total.....\$1,808,011 13				
Transferred to Dep't of Pub. Safety.....\$400				
Trans. to Bureau of City Prop'y.....750				
1,150 00	1,806,861 13			
Disbursements.....		1,787,008 54		
Balances not merging "special".....			\$29,922 00	
Balances merging.....				\$9,938 59

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	Appropriations.	Expended.	Special. Not merging.	Merging.
Bureau of Fire:				
Appropriation.....	\$643,455 08			
Special, Mar. 19, 1888..	500 00			
Special, Apr. 24, 1888..	600 00			
Special, July 2, 1888..	37,000 00			
	<u>\$681,455 08</u>			
Transfer to Bureau of Police.....	3,900 00			
	\$677,555 08	\$676,796 82		\$758 26
Bureau of Health.....	118,334 00	111,264 18		7,069 82
Bureau of Building Inspectors....	11,220 94	10,967 60		252 40
Bureau of Boiler Inspection.....	13,800 00	13,628 04		171 96
Bureau of City Property..\$143,863				
Transfer to the Bureau... 4,200	148,063 00	147,410 44		652 56
Electrical Bureau.....	92,124 83	89,206 06		8,918 77

Statement of receipts of the several Bureaus under my charge, representing the cash paid by them to the City Treasurer, as also the amounts represented by the vouchers received by them from the Receiver of Taxes, to whom, by the provisions of an ordinance approved April 4, 1887, all moneys were to be paid direct.

Bureau of Police.....	\$296 35
Bureau of Health.....	37,920 00
Bureau of Building Inspectors.....	21,922 60
Bureau of Boiler Inspection.....	18,201 45
Bureau of City Property.....	101,316 22
Electrical Bureau.....	35,694 23

The Superintendent of the Bureau of Police presents his report, marked "Exhibit A," to which is appended the report of the Chief of Detectives, Captains, Lieutenants, Fire Marshal, and a financial statement by the Chief Clerk of the Bureau, exhibiting the amount of appropriations, together with the expenditures in detail.

The report shows that the present force consists of 1,658 men: Superintendent, 1; Chief of Detectives, 1; Captains, 4; Lieutenants, 28; Fire Marshal 1; Detectives, 11; Ser-

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geants, 61; House Sergeants, 71; Superintendent of Patrol and Vans, 1; Patrol Sergeants, 20; Patrol Drivers, 20; Patrol Service Patrolmen, 20; Patrolmen, 1,400; Harbor Pilots, 4; Harbor Engineers, 4; Harbor Firemen, 4; Van Drivers, 6; Hostler, 1, and that there are 6 matrons in charge of station houses.

For the use of the Bureau there are 25 station houses, 10 sub-station houses, 10 patrol stations, and 2 police tug boats.

The Superintendent has annexed to his report the separate ones of the Chief of Detectives, Captains, Lieutenants, and Superintendent of Patrol and Van Service, with tabulated tables showing the number of arrests made in each district, also a classification of the crimes committed, and the nativity of those arrested.

The report of the Fire Marshal, thereto appended, shows that there were 1,026 fires during the year, involving a loss of \$2,096,213.58 a decrease in the number of fires from the previous year of 2, and an increase in loss of \$1,060,720.64.

All fires attended with suspicious circumstances were investigated, and the parties arrested, tried, and, in a number of instances, sentenced to long terms of imprisonment. Every effort is made to punish those found guilty of the crime of arson.

I regret to state that 69 persons lost their lives from fire by burning or scalding; attached are tables showing in detail the number of fires, number of box, local, and false alarms; also, the amount of insurance and losses on buildings and contents, with a statement of those arrested for arson, and the disposition of the several cases.

All the reports adverted to are lengthy documents, and show in detail the full operations of the Bureau of Police.

I consider the force active and vigilant, and in a good state of discipline.

The Chief of the Electrical Bureau presents a very elaborate report, "Exhibit B," of the workings of the Bureau, showing in detail the streets used, the wires over and under ground,

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and the various companies to whom privileges have been granted.

It is a matter for the grave consideration of Councils whether the granting of rights and privileges to various companies should not produce a revenue to the city by a heavy license, tax or otherwise, that the corporation might be in a measure reimbursed for the use of our public highways.

It is a matter also to be considered and some means provided by which the tearing up of our highways at all seasons of the year may be avoided.

The suit commenced against the Telegraph, Telephone, and Electric Light Companies for non-payment of license charges having been decided in favor of the corporation by the Supreme Court of the State, the companies in arrears were notified to pay the arrears or amounts overdue to the City Treasurer. In compliance with this notice a number of the companies paid the amounts charged against them, and the same was paid into the treasury. The claims against those not paying were placed in the hands of the City Solicitor for immediate action, whereupon suit was brought.

The total amount collected was \$21,178.76, leaving unpaid \$58,963.24, which represents the amounts due by the several companies from 1884 to 1888.

The report of the Chief goes so thoroughly into the details of all the operations of his Bureau relative to alarms and false alarms of fires, license charges for attachments to city poles, etc., that I deem it unnecessary to make particular mention thereof in this place.

The report of the Chief Engineer of the Bureau of Fire is a lengthy document, "Exhibit C," and enters very fully into the details of the operations of his Bureau, and particular mention is made of the new Silsby Engines, and of the tests and trials made of them before purchase.

All of the tests, as well as the opinion of the experts requested to examine the engines, proved that the Silsby was the

one best adapted for the purpose. After this was apparent the engines were purchased.

The Chief reports these machines are all in active service and in no instance have they failed to do the service required of them; they are light, easily managed, and wonderfully effective.

Appended thereto is a statement in detail of the expenditures, fires and alarms, rolls of the several companies, the houses, apparatus, and material owned by the city.

In the matter of reserve apparatus the Bureau is still deficient, and it is suggested that it receive attention at an early day.

It is also suggested that another chemical engine be procured and located near Second and Vine streets, and an additional hook-and-ladder company be located in the vicinity of Broad and Market streets.

The Bureau of Fire Escapes, which is composed of the Chief Engineer of the Bureau of Fire, the Fire Marshal, and the members of the Bureau of Building Inspectors, under an Act of Assembly and supplements thereto.

The President of the Bureau presents his report "Exhibit D," in which he says that they have during the year accomplished good work, but that they are met with gross ignorance of the law and, in some cases, negligence, which requires much attention on their part, and with the impossibility of the Inspectors of Buildings, by reason of their duties, to give the time or attention required to this branch of the service of the Bureau, makes it extremely onerous upon those who do act, and this must necessarily cause delay.

Upon their request I have directed the Building Inspectors to have an extract of the law relating to fire escapes printed upon the permits granted for repairs to old and the erection of new buildings.

This, it is thought, will do much good; and should the number of building inspectors be increased, I can arrange that one or two of them shall be required to give this matter their

attention each month, which will not interfere materially with their inspection of buildings. It would work thus: say, two for January, two others for February, and so on.

In case of a disagreement as to the character, safety, durability, or other causes as to the fire escape proposed, or whether, under the law, one should be needed, the whole Bureau of Fire Escapes can be called together and decide the question in controversy.

This Bureau expended one hundred and fifty dollars, which was paid from the appropriation made to the Bureau of Fire, for the year 1888.

The Chief Inspector of Steam Engines and Boilers presents his report (Exhibit E) with a condensed statement of the operations of this Bureau for the year ending December 31, 1888.

He reports that no explosions of steam boilers occurred during the year which were subject to the direction or control of this Bureau.

Two explosions occurred in the city: one at the Lafayette Hotel, February 5th last, causing the death of a fireman; the other, on July 31st, of a locomotive boiler at the Columbia Avenue Station of the Philadelphia and Reading Railroad, instantly killing the engineer and fireman in charge. Neither of these cases were subject to the supervision of this Bureau:

Number of boilers inspected.....	3,012
Number of certificates of inspection.....	2,528
Boilers approved.....	2,977
Number of boilers under care of this Bureau.....	3,212
Number of boilers under care of Insurance Companies.....	2,287
Total number of boilers in use in the city during 1888.....	5,499

The report shows all the above stated facts in detail.

The Bureau of Building Inspectors present their annual report, "Exhibit F," for the year ending December 31, 1888.

In which they state that in consideration of the immense number of new buildings, alterations, and additions to old buildings, the numerous complaints of dangerous walls, chim-

neys, water closets, which require constant attention, and then the duties imposed upon them as members of the Bureau of Fire Escapes, so much time is consumed, that it is impossible to perform their duties to their own satisfaction or to that of the public.

They suggest that there should be an increase of inspectors, and that there should be more power given them to enforce orders issued in relation to bad work, unsafe walls, etc.

Tables are appended showing the receipts, earnings, and expenditures, and of the number and description of the buildings and improvements during the year.

Number of buildings erected, alterations, and additions, aggregate 9,858; a statement of the character of the buildings is annexed.

Chief of the Bureau of City Property reports, "Exhibit G," that in pursuance of his suggestion made in his last annual report, this Bureau, by ordinance of March 22, 1888, was transferred to the Department of Public Safety, and to be under the control and direction of the Director thereof.

Appended to his report are statements of receipts and expenditures, also the number of bathers who made use of the public and floating bath houses erected and belonging to the city.

Attention is called to various improvements made to the city property during the year; also, that a considerable amount of repairing has been done to the station and patrol houses, placing them in the best sanitary condition possible.

The Chief again calls attention to the sale of unproductive real estate, the title of which is vested in the city.

I am in accord with the Chief in this matter, as I am convinced that all real estate belonging to the city, and producing no revenue, should be sold.

By pursuing such a course, the city would receive its value in cash, and the same be paid to the City Treasurer for the Sinking Fund, thereby reducing the debt of the city. The purchasers thereof would then improve the property, and the

same would be an additional advantage in the receipt of taxes and water rent; even if not improved it would be subject to taxation, which of course would benefit the city.

The Chief again renews his suggestion of building a retaining wall on the west side of the Schuylkill river, in front of what is known as the "Almshouse" property.

I deem this matter worthy of the serious consideration of Councils, as it would greatly improve the value of the property owned by the city on that side of the river, and reclaim a number of acres of land.

The report from the Bureau of Health, "Exhibit H."

The Board of Health presents a report in which they state that the health of the city is unusually good, with the exception of a slight epidemic of small-pox.

The death rate, 20.04 per thousand of living persons, shows a condition of salubrity which places this city in the front rank of the great cities of the world.

The number of deaths for the year was 20,372, a decrease of 1,347 from the number reported the previous year.

The total number of births for the year was 24,483.

The total number of marriages, 6,700. Population estimated to the middle of July, 1888, upon which the death, birth, and marriage rate are calculated.

The report sets forth in decided terms that a large sum of money is absolutely necessary to place the Lazaretto Station in proper condition for quarantine service. This fact is well known to the Board, but they were helpless to remedy the existing evils for want of an appropriation for that purpose.

It is hoped that City Councils will appreciate the gravity of the situation by promptly supplying the funds to place the station in a complete state of preparedness for any and every possible emergency.

It is our duty to use every effort to provide for any sudden outbreak of disease, and to prevent the spread of all contagious diseases.

Another point is apparent at the station—that of intro-

ducing modern drainage and filling up the marsh in front of the buildings.

There is a great lack of disinfecting apparatus.

The operations at the Municipal Hospital are fully set forth.

Appended to this report is one from the Chief Inspector of Nuisances. The complaints numbered 13,674, of which 1,776 were without signatures, and, therefore, not respected. Thirty thousand eight hundred and sixty official visits were made by the Inspectors.

Since the passage of the law authorizing the Board of Health to pass rules and regulations governing house drainage, which was done, and a force of experts appointed to act as Inspectors, after having passed a technical examination, a thorough reorganization was effected, and the builders and plumbers made to conform to the requirements of the law, and in a few instances where resistance was made they were brought before the Court, and in every case the city was sustained.

To give an idea of this branch of the service there were 10,274 plans submitted; of these 5,760 were new buildings and 4,514 old buildings.

The Inspectors visited these various buildings 34,863 times. It is further shown what the laws, rules, and the duties of the Inspectors are.

Appended is a comprehensive statement of the registrar of births, deaths, and marriages.

The entire report is full of valuable information and statistics, which touch the different matters that come under consideration by the Bureau of Health.

Since my first annual report Councils, by an ordinance approved March 22, 1888, placed the Bureau of City Property under my direction and supervision, and one of my first acts was the placing of the property under the control of the Chief and requiring him to see that all new work, repairs, and alterations were performed in a workmanlike manner, and that in all cases the terms of the contract were fully complied with.

XXIV

Your attention is directed to the fact that Councils have not provided for the inspection of markets and food as is required by the Act of June 1, 1885, except in making an appropriation for the appointment of one person for the inspection of milk. Until they act in this matter I am powerless to provide for any proper sanitary regulation in this particular.

In conclusion, I may be allowed to state that all the reports of the several Chiefs have so fully entered into the operations of their several Bureaus that I deem it unnecessary to enter into any extended review thereof.

Thanking your Honor for the courtesy and kindness extended me and assistance given in the performance of my official duties,

I am, very respectfully,

WM. S. STOKLEY,
Director Department of Public Safety.

ANNUAL REPORT
OF THE
ELECTRICAL BUREAU,

FOR THE YEAR ENDING, DECEMBER 31, 1888.

DAVID R. WALKER, Chief.

PHILADELPHIA:
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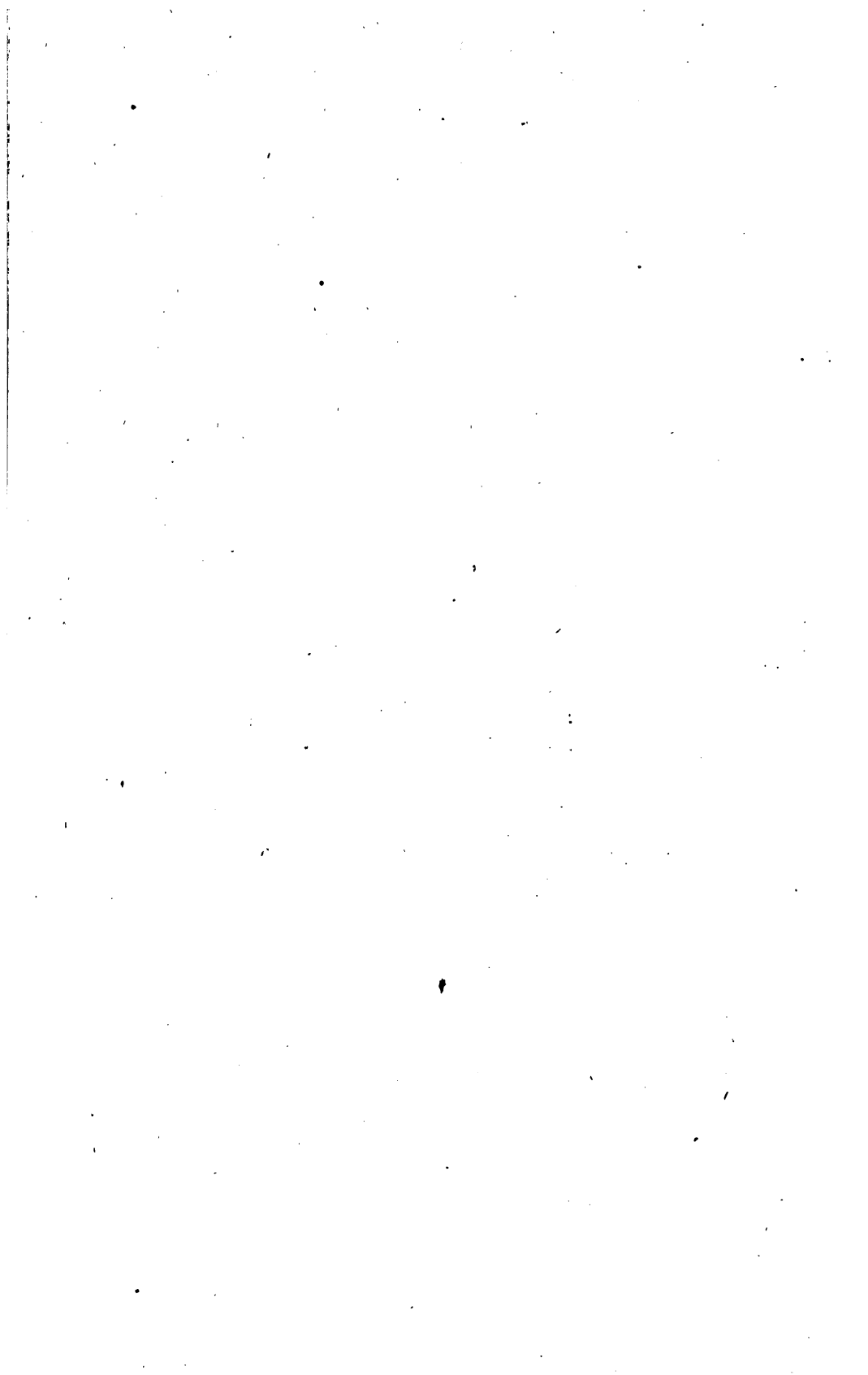
OFFICERS
OF THE
ELECTRICAL BUREAU.

Chief,
DAVID R. WALKER.

Manager,
JOHN C. SAGER.

Clerk,
JOHN S. WETTER.

Inspectors;
ROBERT GILLAN,
EDWARD BURKE,
CHARLES W. HEWLETT.



ANNUAL REPORT
OF THE
ELECTRICAL BUREAU,

For the year ending December 31, 1888,

DAVID R. WALKER, Chief.

Philadelphia, January, 1889.

HON. WM. S. STOKLEY,
Director of the Department of Public Safety.

DEAR SIR:—I herewith submit the second annual report, under the Act of Assembly of June 1, 1885, the fifth as Chief, and the thirty-third in the history of the Bureau.

The notable events of the year relate principally to the increased amount of underground structures laid for electrical purposes, some of those companies established with an overhead service having at last decided upon a plan of procedure, whereby to place their wires underground, having been authorized by ordinance, commenced an elaborate system of underground electrical construction; the structures so laid show the work has been done with a view towards permanency; the majority of those already established with underground structures are making rapid progress toward completion; the benefits to be derived by the city, through its Electrical Bureau, from the various systems so laid, are of considerable value, as means are or will, in the near future, be provided, whereby a large amount of the city's electrical service may be placed underground, where it will be free from the numerous troubles caused by the elements, contact with other wires, etc. The

city's underground service while not extended to the degree that might be expected, it was not deemed best to lay new conduits or cables until plans and arrangements had been made for an extended service through the privileges obtained by ordinance in the sub-structures of private companies; the privileges so gained admit of placing a portion of the city's service underground without the expense of tearing up the highways for the introduction of circuits.

The various branches of the city's electrical system, through the liberal spirit manifested by Councils in its appropriation to the Department of Public Safety for this Bureau, have reached a degree of efficiency never before obtained; the new central office of the fire alarm system, now permanently established at the new City Hall shows such a superiority over the old, formerly in use at Fifth and Chestnut streets, that no comparison can be made.

The fire signal and telephone system, while not further extended, owing to the fact that no new engine companies have been located, still lends its valuable aid toward the successful workings of the Bureau of Fire, as it is used as a medium for the transmission of alarms of fire, and at the same time gives the Chief of that Bureau, direct telephone communication with those under his control.

The police telegraph has been greatly benefited by the substitution of new and improved dial instruments for a number of old printing machines, and the remodelling of a number of dial instruments that have been in the service for many years.

The Police signal and telephone system, as it becomes extended and its uses understood, continues to grow in favor of both officers and men of the Bureau of Police; to the officers as they have the men under control, and to the men as it relieves them, to a great extent, in the management of refractory prisoners, accident cases, etc.; in case of accident this service proves invaluable, in the quick dispatch of the business necessary in such cases, in place of lying probably for several hours awaiting an ambulance to be taken to a hospital, the sufferer is quickly conveyed from the scene of accident by the patrol wagon summoned by its aid, and placed under medical care. The districts now established, with the exception of the Eleventh (11th), are all fairly well covered by the system, and I would suggest that the Department efforts be directed toward the outlying districts, with a view toward its introduction in

that direction. A number of the banking institutions and other corporations in the city, recognizing the advantages to be derived from a direct means of communication with the police department by means of this service, have had the boxes placed in their institutions, at an annual rental required by the department. The returns made of the number of calls, received by the operators from the banks, etc., will show to what extent they have been used, considering the advantages so gained, and the nominal price charged, I would suggest the advisability of all such institutions, introducing this service as an additional means of protection to the large monetary and other interests placed in their charge.

The ever-increasing demands for communication for municipal purposes between points not connected by our system of police telegraph, the police signal and telephone, and the fire signal and telephone systems, have caused the introduction of a great number of telephone instruments, and coming under the care of the Bureau, as they do, receive a large share of its attention; as the Departments and Bureaus are gradually being moved to the new City Hall, the attention of this Bureau has been directed toward the means of communication between them when all are under one roof, the laying of cables in the floors of the building and the introduction of a switch-board of increased capacity will be some of the necessities of the near future.

Cables.

In the introduction of all new appliances difficulties have to be overcome as they present themselves, until they become perfected; unforeseen difficulties have arisen from the adoption of lead-covered cables for underground electrical purposes; steps were taken to overcome this, and from present appearance they have been successful; when first laid it was anticipated that, barring mechanical injury, they would need no further attention, and feeling secure, in that respect, cables were ordered and placed in the conduits as fast as completed; but troubles from escape of current having occurred, an investigation was made late in the year 1887, and the early part of 1888, disclosed the fact that the lead coverings of the cables, when unprotected, were being rapidly eaten away by chemical action of a combination of gases, and unless some means were provided to protect the lead from such action, it would be but a very short time before the cables

thus laid would have to be renewed; with a view toward obtaining some substance which could be applied to the lead to preserve it, an alloy of from three (3) to five (5) per cent. of tin was introduced into the lead before being pressed around the core of the cable, the results from this source were not of a satisfactory character. As it was almost an impossibility to thoroughly mix the mass and distribute the tin in all its parts, the effect was the lead sheathing would be acted on in spots to a considerable depth, while in other places it would show a slower action; but in no case was the sheathing entirely free; failure in this caused a search in other directions, with the view toward making an outward application of some substance which would not be acted upon in itself and at the same time furnish a protection for the lead covering of the cables; the attention of the Bureau was drawn toward an insulating compound called P. & B. paint, for which great claims had been made; from the testimonials presented and inquiries made personally, it was deemed advisable to give it a test. As a protection to the lead covering, I suggested that a number of the cables furnished this Bureau be served with a coating of the P. & B. compound; early in January a piece about six hundred (600) feet of three (3) conductor cable so served was laid on Broad street from Norris to Diamond; up to the present time, or one (1) year since it was drawn into the boxes, it shows no action whatever, the paint while soft, shows no disposition to leave the lead covering of the cable; taking into consideration the fact that the unprotected lead covering will show the effect of chemical action within twenty-four (24) hours after being laid, and this cable after being laid for six (6) months showed no chemical action whatever, I conferred with the makers of the cable and suggested to them the braiding of the lead covering and the saturating of the braid with the P. & B. compound; a sample length of four hundred and ninety-five (495) feet was made and laid on August 24th, and to this date shows no action whatever; it is the purpose of the Bureau to have its cables so protected in the future. All of the three (3) conductor cables furnished the city and laid under ordinance by the American Telegraph and Telephone Company early in 1887, having given out from this cause, were renewed at the expense of the company furnishing them; that laid on Ton alley, Water and Walnut streets, and on Fifteenth street from Walnut to Market streets, was replaced with a round lead covered three (3) conductor

braided and painted cable; that laid on Fifth, Market and Thirteenth streets on Filbert street, between Thirteenth and Fifteenth streets, and on Fifteenth street from Market to Filbert was replaced with a three (3) conductor lead covered and painted clover-leaf cable. The six (6) conductor, anti-induction, unprotected, lead-covered cable laid by the city on Broad street, between the north side of Poplar, and the south side of Brown street was replaced with a painted cable of the same pattern; the painted six (6) conductor, anti-induction cable laid by the city during November, 1887, on Broad street between Fairmount avenue and the new City Hall, shows no sign of deterioration; the cable first laid by the city in May, 1886, between Columbia and Lehigh avenues, being laid in pitch, shows no signs of the destructive action of the gases, and are to-day in as good condition as when first laid. The attention of the Bureau, during the year toward the city's underground electrical service, while not in the nature of extended advancement, was principally directed toward permanently securing that already laid; the only cable laid by the city was four thousand five hundred and fifty-three (4553) feet of six (6) conductor, unprotected, lead-covered cable, bought early in 1887, and laid on Broad street between Lehigh avenue and Tioga street; and about eight hundred and fifty (850) feet of electric light cable on Broad street between Ontario and Tioga streets, the America Telegraph and Telephone Company, under ordinance laid for the use of the city about two and one-eighth ($2\frac{1}{8}$) miles of three (3) conductor, lead-covered Brooks cable on Broad street between City Hall and Norris street, and is used by the Director of Public Safety and the Chief of the Bureau as a means of communication between their residences and the departments; the sheathing of this cable was alloyed with about five (5) per cent. of tin; no further protection was given it as the makers thought the tin served the purpose as well.

The underground electric light cables laid by the city on Broad street, between Fairmount avenue and Tioga street, during 1886 and 1887, and the Chief of the Bureau, in the advocacy of their practicability have been the object of considerable adverse criticism; the assertion has been made that the underground electric light service in this city was an absolute and total failure; on the contrary, a better service could not be desired. The facts prove themselves in over two and a half ($2\frac{1}{2}$) years of constant service, the lights supplied by these

cables, with current, not having been out all night during that time; while some difficulties have been experienced at the terminals by the action of static discharges, sparking through the insulation and grounding, they have been overcome to a great extent by methods adopted by ourselves. The principal cause of these difficulties was in the manner in which the dynamo was handled in shutting down in the morning, or the improper method of testing by those unskilled in such matters. Instructions given by the Chief to an efficient official representing the company supplying the current caused a cessation of trouble from this source; when a ground would occur at a terminal, the lead would be cut away for about one-quarter ($\frac{1}{4}$) of an inch, thus removing the ground; the edges of the lead sheathing were then drawn away from the insulation, forming a sort of cup, into which an insulating compound was run; the increased thickness of insulation and the removal of the sharp edges of the lead to a greater distance from the conductor lessened the probability of a spark at that point. Again, it is my purpose in all future orders to have an increase of insulation sufficient in all ordinary cases to prevent such sparking. The manufacturers of the cable have patented a device for the protection of the terminals of those cables used for arc lighting; the device is simple and easily applied, and from what I have seen of it in practice, will thoroughly protect cables on which they may be placed. While cared for and maintained by the city, these cables are being used by private companies to supply current for city lighting; the benefits to be derived from such an arrangement are few, while the dangers attending the same, through damage to them are many, as the employees of these companies under contract to supply the current cannot of necessity be expected to give the same care and attention to the handling of the service, as if they were under the control of this Bureau.

The electric light ordered moved by an ordinance of Councils from Broad and Reading Railroad crossing to Broad and Huntingdon streets, leaves the crossing very dark and dangerous, and as considerable travelling is done in that direction, I would suggest the placing of a lamp at that point.

Conduits (City.)

The only conduit laid by the city during the year was on the west side of Broad street, south of Chestnut to Passyunk

avenue; a MacDonald patent conduit, twelve (12) by nine (9) inches, containing six (6) round ducts, each two and one-half ($2\frac{1}{2}$) inches in diameter, was laid from the south side of Chestnut street to the south side of Washington avenue, a distance of four thousand eight hundred and fourteen (4,814) feet; and a box of the same pattern, nine (9) by nine (9) inches, containing four (4) ducts, each two and one-half ($2\frac{1}{2}$) inches in diameter, from the south side of Washington avenue to Passyunk avenue, a distance of four thousand four hundred and forty-two (4,442) feet, a total of nine thousand two hundred and fifty-six (9,256) feet.

Conduits (Bell Telephone Company.)

The underground structures, for electrical purposes, laid by the Bell Telephone Company, of this city, are of the most elaborate and substantial character; their trunk line service on Market street consisting of iron tubes or pipes, sixteen (16) feet long and two and one-half ($2\frac{1}{2}$) inches in diameter are laid in cement to the number required; upon the top of this bed of iron pipes and cement, creosoted, square logs, eight (8) feet long and three and one-half ($3\frac{1}{2}$) by three and one-half ($3\frac{1}{2}$) inches, external dimensions, and bored with a hole two and one-half inches in diameter are laid; in some instances a tube of wood fiber six (6) feet long, with a hole two and one-half ($2\frac{1}{2}$) inches in diameter was used; the man holes built for their trunk line on Market street, at the intersections of the north and south streets, varying in size as circumstances required, are from five (5) by six, to ten (10) by eleven (11) feet, in diameter, are of an average depth of eight (8) feet, with thirteen (13) inch brick walls; the street surface is held up by heavy iron girders placed two (2) feet apart, between which brick arches are sprung; a circular opening, thirty-six inches in diameter, serves as an entrance to them. The top is leveled off with a bed of concrete; their laterals, or branch connections, with a smaller number of ducts and of a necessity with smaller manholes, show the same good work, and if the standard of excellence at present in force is maintained in their future operations, they will have the finest underground plant in the city, if not in this country. To distribute the wires their lateral or branch conduits are laid to the centre of a block of buildidgs, via an alley or small street, from the manhole at the end of the branch, iron tubes, two and one-half ($2\frac{1}{2}$)

inches in diameter, are run to the foot of a spar, seventy-five (75) or eighty (80) feet in height, up which the cables will be carried to a cable box, from which the wires will be dropped into the rear of the buildings in which the service will be used; a detailed account of the amount laid by them will be found below:

West side of Market street bridge, Schuylkill river.

East side of Market street bridge, Schuylkill river.

Penn street, between Lombard and Pine streets.

Pine street, between Water and Penn streets.

Water street, between Pine and Spruce streets.

Water street, between Spruce and Dock streets, south side.

Water street, between south side of Dock and north side of Dock street.

Water street, between north side Dock and south side Walnut streets.

Water street, between south of Walnut to south side of Walnut street.

Water street, between south side Walnut to north side of Walnut street.

Water street, between north side of Walnut to south of Chestnut street.

Water street, below Chestnut, to south side of Chestnut street.

Water street, south side of Chestnut street to below Market street.

Water street, below Market to Market street.

Water street, from Market to below Arch street.

Water street, below Arch street to south side of Arch street.

Water street, south of Arch street to below Race street.

Water street, from Race street to Vine street.

Second street, between New and Craven streets.

Second street, between Elfreth and Craven streets.

Second street, between Coombs alley and Elfreth street.

Second street, between Coombs alley and Market street.

Second street, between Black Horse alley and Market street.

Second street, between Black Horse alley and Gothic street.

Second street, between Dock and Gothic streets.

Second street, between Dock and Spruce streets.
 Second street, between Pine west and Spruce street.
 Second street, between Pine west and Pine east.
 Second street, between Relief and Pine streets, east.
 Second street, between Relief and South streets.
 New street, west from Second to distributing pole.
 Craven street, east from Second to distributing pole.
 Elfreth street, east from Second to distributing pole.
 Coombs alley, east from Second to distributing pole.
 Black Horse alley, east from Second to distributing pole.
 Gothic street, east from Second to distributing pole.
 Dock street, east from Second to distributing pole.
 Spruce street, east from Second to distributing pole.
 Pine street, east from Second to distributing pole.
 Relief street, east from Second to distributing pole.
 Third street, from Gaskill street to Stampers alley.
 Third street, from Union street to Stampers alley.
 Third street, from Union street to Evelina street.
 Third street, from Willings alley to Evelina street.
 Third street, from Willings alley to Harmony court.
 Third street, from Elbow lane to Harmony court.
 Third street, from Elbow lane to Market street.
 Third street, from Legrange street to Market street.
 Third street, from Legrange street to Fetters lane.
 Third street, from Cherry to Fetters lane.
 Third street, from Cherry to Branch street.
 Third street, from Vine to Branch street.
 Gaskill street, east of Third street.
 Gaskill street, west of Third street.
 Stamper's alley, east of Third street.
 Union street, east of Third street.
 Union street, west of Third street.
 Evelina street, east of Third street.
 Willings alley, west of Third street.
 Harmony court.
 Elbow lane, east of Third street.

Le Grange street, east of Third street.
 Fetters lane, east of Third street.
 Branch street, west of Third street.
 Cherry street, west of Third street.
 Commerce street, west of Fifth street.
 Market street, between Water street and Front street.
 Market street, between Second street and Front street.
 Market street, between Second street and Third street.
 Market street, between Hudson street and Third street.
 Market street, between Third street, S. E., and Third street N. E.
 Market street, between Hudson and 406 Market street.
 Market street, between Fourth street and Fifth street.
 Hudson street, between Market street and distributing pole.
 North curb Market street to Water street manhole.
 North East Second and Market to Second street manhole.
 Library street, east from Fifth street to manhole.
 Market street, between Fifth street and Sixth street.
 Market street, between Sixth street and Decatur street.
 Market street, between Seventh street and Decatur street.
 Market street, between Seventh street and Eighth street.
 Market street, from Fifth street manhole to north crossing.
 Fifth street, between Market street and Merchant street.
 Minor street, west of Fifth street to terminal pole.
 Merchant street, east of Fifth street to terminal.
 Fifth street, between Merchant street and Minor street.
 Fifth street, between Minor street and western terminus.
 Fifth street, between Minor street and north crossing Chestnut street.
 Market street, Eighth street to Eleventh street.
 Eleventh street, between Market street and Marble alley.
 Eleventh street, between Clover street and Marble alley.
 Clover street, west from Eleventh street to distributing pole.
 Decatur street, between Market street and Jayne street.
 Decatur street, between manhole and distributing pole.
 Ninth street across Market street.

Conduits.

(American Telegraph and Telephone Company.)

The American Telegraph and Telephone Company, while making no radical changes from their form of construction of last year, still continue to maintain their form of excellent workmanship in the laying of their conduits and construction of manholes, etc. The amount of work done by this company during the year, if continued at the same rapid rate, will in a short time find them with a completed and perfected system of underground conduits covering a large portion of the city, and in addition to the amount mentioned in my last report they have laid during the present year, one hundred and seventeen thousand six hundred and eighty-nine (117,689) feet; the following list will show the extent of their plant as far as completed:

Ton alley, from east side Delaware avenue to east side Water street.

Water street, from south side Ton alley, to north side Walnut street.

Walnut street, from east side Water street to east side Twenty-fourth street.

Twenty-fourth street, from north side Walnut street to north side Chestnut street.

Chestnut street, from east side Twenty-fourth street to Schuylkill river.

Market street, from west side Water street to north side Thirteenth street.

Market street, from west side Fifteenth street to east of the bridge.

Market street, from west side of the bridge to west side of Lancaster avenue.

Broad street, east side, from north side Filbert street to Poplar street.

Broad street, west side, from south side Poplar street to south side Cumberland street.

Broad street, west side, from south side Cumberland street to northeast corner Lehigh avenue.

Broad street, east side, from north side Lehigh avenue to south side Pennsylvania Railroad.

Fourth street, west side, from north side Washington avenue to south side South street.

Fourth street, from south side South street to north side Walnut street.

Fourth street, from north side of Walnut street to center of Girard avenue.

Front street, west side, from north side Market street to south side Vine street.

Front street, from south side of Vine street to south side Emerald street.

Thirteenth street, west side, from north side of Market street to north side Filbert street.

Filbert street, north side, from west side of Thirteenth street to west side Fifteenth street.

Fifteenth street, west side, from north side of Filbert street to north side Walnut street.

Fifteenth street, from north side of Walnut street to south side Washington avenue.

Lancaster avenue, south side, from north side of Market street to north side Pennsylvania Railroad.

Third street, west side, from south side of Spruce street to north side Market street.

Fifth street, west side, from north side of Walnut street to north side Market street.

Seventh street, east side, from north side Walnut street to north side Market street.

Seventh street, from north side of Market street to north side Race street.

Tenth street, east side, from north side of Walnut street to north side Market street.

Tenth street, from north side of Market street to north side Montgomery avenue.

Twenty-third street, west side, from south side of Washington avenue to north side Walnut street.

Twenty-third street, from north side of Walnut street to north side Market street.

Twenty-third street, from north side of Market street to north side Callowhill street.

Girard avenue, south side, from west side Fourth street to west side of Front street.

Girard avenue, from west side of Front street to west side Shackamaxon street.

Shackamaxon street, from centre of Girard avenue to south side Beach street.

Richmond street, east side, from west side of Shackamaxon street to east side Cumberland street.

Emerald street, from west side of Front street to north side Lehigh avenue.

Race street, north side, from west side of Front street to west side of Twenty-third street.

Columbia avenue, north side, from west side of Front street to west side Broad street.

Callowhill street, north side, from west side of Front street to west side Twenty-third street.

Tenth street, east side, from north side of Walnut street to south side Washington avenue.

Ridge avenue, west side, from north side of Callowhill street to south side Girard avenue.

Front street, west side, from north side of Market street to south side Wharton street.

The conduit of the Underground Electric Light and Power Company, laid at the south side of Chestnut street, between Third and Broad streets, have made no further extension of their service.

The Edison Electric Light Company, whose object is the supplying of incandescent lights from a central station by means of underground tubes, have their station 907 Sansom street almost completed, and have in addition to that laid last year, placed eighty-three thousand three hundred and thirty-six (83,336) feet of tubing underground. The following list will show the streets on which they have been laid:

South side of Walnut street, from Third street to Twenty-third street.

North side of Sansom street, from Ninth street to Twentieth street.

North side of Chestnut street, from Fifth street to Nineteenth street.

South side of Market street, from Third street to Juniper street.

West side of Third street, from Walnut street to Market street.

East side of Fourth street, from Walnut street to Market street.

East side of Fifth street, from Locust street to Market street.

East side of Sixth street, from Chestnut street to Market street.

East side of Seventh street, from Walnut street to Market street.

East side of Eighth street, from Walnut street to Market street.

East side of Ninth street, from Walnut street to Market street.

East side of Tenth street, from Walnut street to Market street.

West side of Eleventh street, from Walnut street to Market street.

East side of Twelfth street, from Sansom street to Market street.

West side of Thirteenth street, from Walnut street to Market street.

East side of Broad street, from Spruce street to Chestnut street.

East side of Fifteenth street, from Walnut street to Chestnut street.

East side of Seventeenth street, from Walnut street to Chestnut street.

East side of Eighteenth street, from Walnut street to Chestnut street.

West side of Nineteenth street, from Walnut street to Chestnut street.

East side of Twentieth street, from Walnut street to Chestnut street.

West side of Twenty-first street, from Walnut street to Chestnut street.

East side of Twenty-second street, from Walnut street to Chestnut street.

The Penn Electric Light Company, a description of whose conduits was given in last year's report, have during the year

added nineteen thousand six hundred and ten (19,610) feet to the amount laid by them during the year 1887. The following list will show the streets in which their conduits are placed:

North side of South street, from Second street to Twenty-fifth street.

North side of Sansom street, from 908 Sansom street to east side of Broad street.

South side of Walnut street, from Fourth street to Fifteenth street.

South side of Walnut street, from Fifteenth street to Twenty-second street.

North side of Chestnut street, from Second street to Twenty-second street.

South side of Market street, from Third street to Juniper street.

South side of Vine street, from Ninth street to Eleventh street.

West side of Third street, from Walnut street to Market street.

West side of Third street, from South, to a point 175 feet north.

East side of Fourth street, from Walnut street to Market street.

East side of Fifth street, from Walnut street to Market street.

East side of Fifth street, from Walnut street to Locust street.

East side of Sixth street, from Chestnut street to Market street..

East side of Seventh street, from Walnut street to Market street.

East side of Eighth street, from Walnut street to Market street.

East side of Ninth street, from Walnut street to Vine street.

East side of Tenth street, from Walnut street to Market street.

West side of Eleventh street, from Walnut street to Market street.

West side of Eleventh street, from Vine street to Noble street.

East side of Twelfth street, from Sansom street to Market street.

West side of Thirteenth street, from Walnut street to Market street.

East side of Broad street, under sidewalks, from Walnut street to Spruce street.

East side of Fifteenth street, from Walnut street to Chestnut street.

West side of Seventeenth street, from Walnut street to Chestnut street.

East side of Eighteenth street, from Walnut street to Chestnut street.

West side of Nineteenth street, from Walnut street to Chestnut street.

East side of Twentieth street, from Walnut street to Chestnut street.

West side of Twenty-first street, from Walnut street to Chestnut street.

East side of Twenty-second street, from Walnut street to Chestnut street.

The cables of the Electrical Construction and Maintenance Company (Brooks' oil system) still continue in the same condition as represented in my last report, no effort having been made toward placing them in working order.

The Keystone Light and Power Company, whose underground structures were mentioned in my report of 1887, have made no further extension to their system, Councils not having granted them any further privileges.

Police Telegraph.

For a term of years, through lack of funds, the proper workings of the Police Telegraph were handicapped to a great extent by a number of instruments entirely unfitted for the purposes to which they were devoted; they were of such a complicated nature as to require considerable skill in keeping them in repair, and were a source of anxiety on account of their liability of failure when needed.

On assuming the control of the Bureau, I determined, as soon as possible, to entirely remodel this service; with that end in view, in 1887, the north line, with five (5) stations, was reconstructed, and new instruments placed in circuit, and this year the old printing instruments, seven (7) in number, were removed from the northwest police circuit and replaced with new and improved dial instruments, by the introduction of which more perfect service has been assured.

Police Signal and Telephone System.

The efforts of the Bureau in the Police Signal and Telephone System have mainly been directed toward the extension and improvement of the service already established, no new Central Stations having been established. Six (6) new boxes have been placed in the Ninth Police District, seven (7) in the Twenty-first Police District, eleven (11) in the Twenty-second Police District, seven in the Twenty-third Police District, and five in the Twenty-fourth Police District; the additional boxes placed in these districts increasing their efficiency to a great extent.

The Third National Bank, Merrick and Market streets, has been connected with the Twentieth Police District Patrol; the Keystone Watch Company at Nineteenth and Brown streets has been connected with the Ninth Police District Patrol, and the Northwestern National Bank with the Twenty-third Police District Patrol.

The Patrol Signal Station at northeast corner of Eighth and Arch streets was totally destroyed on the night of January 23d by the falling of the walls from a burning building. A number of transfers of signal stations were made from their original locations to those more suited.

The following table will show the number of boxes in each Police District in the Patrol Signal Service:

Patrol.	Police Districts.	Banks, etc.	Total Boxes.
No. 1	Third and Fourth.....	2	20
" 2	Twenty-first.....	1	23
" 3	Sixteenth.....	1	22
" 4	Sixth and Twentieth.....	2	19
" 5	Fifth and Nineteenth.....	4	24
" 6	First and Seventeenth.....		19
" 7	Second and Twenty-fifth.....		25
" 8	Twenty-second.....		19
" 9	Twenty-third.....	1	15
" 10	Twenty-fourth.....		15
	Ninth.....	1	14
	Eleventh.....		8

A total of seventeen (17) Police Districts and two hundred and twenty-three (223) boxes, twelve (12) of which are in banks, depots, and factories.

Fire Signal and Telephone System.

This efficient auxiliary to the alarm service and the Bureau of Fire, while not having been extended to any great length, still continues to give satisfactory aid to the Bureau of Fire.

Fire Alarm Service.

Improvements to the alarm service have been confined principally to the renewal of wires, as no additional engines were located during the year, there has accordingly been no extension in that direction. A move toward the placing of this service underground has been made by connecting alarm wire No. 8 underground from the Broad street office to Broad and Lehigh avenue, a distance of two and three-fourths ($2\frac{3}{4}$) miles.

Fire Signal Service.

The purchase and locating of forty (40) new fire signal boxes, the erection of a number of new poles, and the running

of a large amount of new wire, has given the Bureau the opportunity to reach those rapidly growing sections of the city which have hitherto been almost entirely uncovered, and in the event of fire have now the facilities of speedily communicating with the Bureau of Fire. A newly-established fire signal-box circuit running to Germantown is carried for three and three-fourths ($3\frac{3}{4}$) miles by means of an underground cable from the office at Broad and Market streets to Broad and Tioga streets, and is the first circuit used in that way, in this city, for fire signal purposes. A signal box, set upon an iron post made after a design furnished by the Bureau, has been placed on this underground wire at Broad and Indiana avenue, being the first signal box placed on the underground service. Keyless signal-box doors have been placed on ten (10) of the boxes in the central portion of the city, but from the trouble experienced in their maintenance I would not advocate an extension of the number used, as they are at present constructed. At the close of the year all the fire signal boxes, except six (6) belonging to the Pennsylvania Railroad Company, were of a uniform pattern, all of the old style boxes having been removed. To insure an efficient service, and to have all the boxes in harmony with the machinery now in use, these will have to be changed.

On the night of May 10th, during a storm of wind and rain, one of the compound wires, taken possession of by the city from the Postal Telegraph Company for non-compliance of ordinance, which had been used by the Bureau as part of signal box circuit No. 6, broke at Broad and Cuthbert streets and spiralled back, coming in contact with both sides of a Brush electric light wire, short circuiting it; the entire current so formed entered the cable box on the pole at Juniper and Cuthbert streets, into which a majority of the city wires were run, set it on fire and completely destroying it. The damage was quickly repaired, and measures adopted with a view toward preventing a recurrence of such an accident.

On the night of October 13th three (3) of the boxes on signal current No. 7 were burned out by an electric light current. An investigation disclosed the fact that a guy wire, used for holding back the electric light pole on Eighth street, just north of Market street, which had been made fast around the pole and pipe on which signal box No. 26, at Eighth and Market streets, was placed, had come in contact with a Brush electric

light wire, the current was carried via the guy to the iron pipe in which were enclosed the wires leading to the box, burning through them, and from thence, via our No. 7 signal wire, to a ground formed by an iron bolt, including in its course boxes 26, at Eighth and Market streets, 613, at Wanamaker's, and 614, at the Masonic Temple, all of which were damaged to such an extent that they had to be sent back to the manufacturers to be repaired. The United States Electric Lighting Company to whom the guy belonged paid the expense of the repairs to the boxes.

Number of Telephones in Service.

Rapidly increasing in numbers, the telephone service of the city receives a large share of the care and attention of the Bureau.

At the close of the year 1887 there were two hundred and seventy-seven (277) telephones maintained by the Bureau; at the close of 1888 the number was three hundred and thirty-one, an increase of fifty-four (54). This does not include the forty-three (43) free telephones located in city and county offices, cared for at the expense of the telephone company, making a total of three hundred and seventy-four (374) telephones in the city service.

The police Tug Samuel G. King, now permanently located at Sansom street wharf, on the Schuylkill river, has been placed in telephone connection by means of underground wires with the office of the Bureau in the New City Hall. The stables of Patrol No. 9, at Twenty-second and York streets, has been connected with the Twenty-second District Police Station, at Park and Lehigh avenues, and the stable of Patrol No. 10, Cambria and Stouton, with the Twenty-fourth Police District, at Clearfield and West streets. Telephone connection have been made between the Bell Telephone Exchange and our Broad street office. The Ninth and Twenty-third Districts using the same patrol wagon necessitated the connecting of these two stations together for the running of the same.

In the annual appropriation to the Bureau for 1888, an item of seven hundred (700) dollars was set apart for the introduction of the telephone into the Armories of the First, Second, and Third Regiments, the City Troop, and the State Fencibles. During August these wires were run and the instruments connected in circuit with the office in City Hall.

The residence of Dr. Andrews, Police Surgeon, was connected by telephone with the Bureau. To facilitate the quick dispatch of messages in case of report of contagious diseases, and for the purpose of keeping this important service free of trouble and ready for business at all times, the telephone wires leading from the Board of Health to the Municipal Hospital have been connected to the switch-board at the Fifth street office, taken care of and maintained by the Bureau.

The telephone service between the Episcopal and Jewish Hospitals, which had been maintained, under contract, by the Bell Telephone Company at an annual expense of four hundred and fifty (450) dollars, on the 1st of July was brought under the control of this Bureau at an annual expense for rental of two (2) sets of telephones of eighty (80) dollars; a saving of three hundred and seventy (370) dollars yearly has thus been acquired.

As it is the intention of the Bureau to operate and maintain all city electrical service, I notified the Bell Telephone Company of the fact, and that the city, early in 1889, would take charge of the service between this office and the hospitals to which they were connected, thus saving a considerable amount of money to the city.

In order to bring the Sub-Police Stations directly under the control of the Lieutenant of Police representing the district in which they are located, it has been the intention of the Bureau to connect them with the main station by telephone. With that end in view I have connected Olney sub-station with the main station at Germantown, and the Falls of Schuylkill sub-station with the main station of the Twenty-second District at Lehigh and Park avenues, the service so established adding greatly to the proper workings of the police business in the districts named. With a view of facilitating the quick despatch of business between the County Prison and the Bureau of Police, that institution has been connected by telephone with the Seventeenth Police District.

At the request of the Director of the Department of Public Works the office of Chief Park, of the Bureau of Gas, was connected by telephone with the office of A. J. McCleary, Twenty-third and Market streets, the Richmond Gas Works, and the new gas office at Juniper and Filbert streets, at the expense of that Department.

Electric Lighting.

The service given by private electric light corporations for street lighting has been the source of considerable complaint from all quarters, on account of the unreliable and variable condition of the lights, caused, as near as I can judge, from the overloading of the circuits on which the City lamps are placed. The lights, as a rule, are of greater steadiness and brilliancy during the later hours of the night, after the private lights have been extinguished.

The service at the close of 1887 for street lighting consisted of five hundred and twenty-four (524) lamps, maintained at an average cost of fifty-four-and-one-third ($54\frac{1}{3}$) cents per lamp per night; at the close of 1888 there were seven hundred and fifty-six (756) lamps maintained by the city, and fifty (50) by the Girard Estate, at an average cost of fifty-and-five-sixth ($50\frac{5}{6}$) cents per lamp per night. While these lights are supplied by private corporations, their location and supervision, after erection, comes under the care of this Bureau, thus involving considerable attention from its officers. The Bureau also looks after the electric light service, maintained at the expense of the Girard Estate, on Front street, Delaware avenue, and the College.

Extinguishing Gas and Gasoline Lamps.

A resolution of Councils authorizes the Chief of the Electrical Bureau to extinguish gas or gasoline lamps in the neighborhood of electrical lights, where, in his judgment, they could be dispensed with. In compliance with the above resolution, eight hundred and seventy-two (872) gas and gasoline lamps were extinguished by the Bureau of Gas, and approved by me, of which seven hundred and eighty-six (786) were by the Philadelphia Gas Works, sixty-six (66) by the Northern Liberties Gas Works, and twenty (20) gasoline lamps, making a total of twenty-one hundred and eighty (2180) lamps extinguished where electric lights have been introduced, an average of 2.7 gas and gasoline lamps extinguished for each electric light.

License Returns.

The suit entered by the city against the Telegraph, Telephone and Electric Light Companies for non-payment of license charges regulated by ordinance, having been decided

in favor of the city, those companies in arrears for the same were notified to pay the amounts overdue to the City Treasurer; in compliance with the order the following amounts were paid for maintenance of poles and mileage of wire by the American Union Telegraph Company for 1884, three hundred and forty (340) dollars; Atlantic and Pacific Telegraph Company for 1883, three hundred and ninety-seven (397) dollars and fifty (50) cents; for 1884, six hundred and eighty-seven (687) dollars; Atlantic Refining Company for 1885, 1886, 1887, and 1888, one hundred and five (105) dollars; Bell Telephone Company, of Philadelphia, for 1883 and 1884, including costs, interest, etc., seven thousand one hundred and thirty-eight (7,138) dollars and twenty-one (21) cents; Continental Telegraph Company for 1883, one hundred and five (105) dollars; Frankford Electric Light and Power Company for 1885, 1886, 1887, and 1888, one hundred and fifteen (115) dollars; Girard Point Storage Company for charges until 1888, thirty-five (35) dollars; Harrison Brothers & Co. for back charges until 1888, two hundred and fifty-one (251) dollars; Mutual Union Telegraph Company for 1883, twelve hundred and seventeen (1,217) dollars; for 1884, twelve hundred and twenty-seven (1,227) dollars; Northern Electric Light and Power Company, five hundred and eight (508) dollars, for charges prior to 1888; Peerless Brick Company, forty-five (45) dollars, for charges prior to 1888; Pennsylvania Railroad Company, ten hundred and thirty-three (1,033) dollars, for charges prior to 1888; People's Telephone Company, twelve (12) dollars and fifty (50) cents, for charges prior to 1888; Philadelphia Local Telegraph Company, eleven hundred and fifty-three (1,153) dollars and fifty-five (55) cents, for 1884, including interest and costs; Philadelphia, Reading and Pottsville Telegraph Company, twenty hundred and sixty-two (2,062) dollars and fifty (50) cents, until 1888; Western Union Telegraph Company, for 1883, fourteen hundred and seventy-two (1,472) dollars and fifty (50) cents; for 1884, thirty-two hundred and seventy-four (3,274) dollars; a total of amounts collected on back charges of twenty-one thousand one hundred and seventy-eight (21,178) dollars and seventy-six (76) cents; leaving unpaid fifty-eight thousand nine hundred and sixty-three (58,963) dollars and twenty-four (24) cents, suit for which has been entered by the City Solicitor, the companies refusing to pay the amounts due from 1884 until 1888.

For non-payment of the license charges the telephone wire belonging to the Bridesburg Manufacturing Company was removed from the city poles, as directed by ordinance.

The larger portion of the wires of the Baltimore and Ohio Telegraph Company that had been placed on city poles, as well as those on their own poles, were abandoned and taken down during the year; their poles on Passyunk avenue, between Thirteenth and Eighteenth streets, were verbally tendered by the company to the Bureau, and accepted as city property.

Moneys Paid into the City Treasury.

The total amount paid into the Treasury from all sources, to the credit of this Bureau, amounts to thirty-five thousand six hundred and ninety-four (35,694) dollars and twenty-three (23) cents, divided as follows:

License charges for the years 1883 and 1884, including interest and costs, collected by the City Solicitor.....	\$21,178 76
License charges for the years 1885, 1886, and 1887.....	2,977 00
License charges for the year 1888.....	10,202 50
Sale of old material for 1888.....	331 88
Use of the Police Signal and Telephone System, 1888.....	709 59
License charges by Knickerbocker Ice Company for 1889.....	294 50

Of the ninety-two thousand one hundred and twenty-four (92,124) dollars and eighty-three (83) cents appropriated to the Bureau for 1888, eighty-three thousand two hundred and six (83,206) dollars and six (6) cents was expended, one thousand and forty-four (1,044) dollars and twenty-eight (28) cents merged, and seven thousand eight hundred and seventy-four (7,874) dollars and sixty-nine (69) cents was carried to the books of 1889.

Number of Poles, Miles of Wire, etc.

According to the returns made by the Telegraph, Telephone, and Electric Light Companies, there were on the 31st day of December, 1888, on the highways of the city five thousand six hundred and seventy-five (5,675) poles, not including those along railroad tracks and city poles, an increase of five hundred and three (503); four thousand three hundred and twenty-three and a half (4,323½) miles of telegraph and tele-

phone wire, being a decrease of four hundred and thirteen and a half ($413\frac{1}{2}$) miles; two hundred and seventy-eight and a half ($278\frac{1}{2}$) miles of electric light wire, an increase of seventy-nine and a half ($79\frac{1}{2}$) miles of city wires, being an increase of one hundred and thirty-one (131) miles, making a total of city and all other wires, on poles, fixtures, and buildings, of five thousand three hundred and ninety-seven and a half ($5,397\frac{1}{2}$) miles, a decrease of one hundred and ninety-three and a half ($193\frac{1}{2}$) miles from the previous year; ten thousand three hundred and twenty-four (10,324) poles, four thousand six hundred and forty-nine (4,649) of which are the property of the city, an increase of five hundred and thirty-eight (538). There are eleven thousand four hundred and five (11,405) attachments to city poles, being an increase of four hundred and ninety-two (492), to support three hundred and sixty-eight (368) miles of wire. The increase of poles was mainly due to the extension of the electric light service for lighting the highways, to systems of central distribution adopted by the Bell Telephone Company for their underground service, and the extension of the city's electrical service.

Wires Underground.

At the close of the year there had been placed underground in the city eight hundred and twenty-five and one-half ($825\frac{1}{2}$) miles of telegraph, telephone and electric light wires, of which the city owns fifty-seven and one-fourth ($57\frac{1}{4}$) miles.

Conduits.

The returns made by these companies working on underground privileges, together with that laid by the city, show a total of three hundred and thirty-four thousand nine hundred and twenty-four (334,924) feet of wood conduit, sixty-eight thousand four hundred and thirty-five (68,435) feet of iron pipe and fifteen hundred and eighty-one (1,581) feet of fibre, of which the city owns thirty-six thousand and forty (36,040) feet of wood conduit and sixteen thousand five hundred and ninety-six (16,596) feet of iron pipe laid by the Penn Electric Light Company for the use of the city. To give the city access to these pipes fifteen (15) extra man-holes were built by the Penn Company during 1888; a number still remain to be built to complete the system as far as laid.

Permits.

There were one hundred and sixty-one (161) permits issued during the year for the erection of poles and wires and for general repairs to lines already erected, to those authorized by Councils to maintain overhead electrical service, an increase in the number issued of fifteen (15) over last year; the permits issued for the erection of new poles were only given for the extension of the electric light service for public lighting, and for those authorized by ordinance to erect poles for their method of central distribution, by means of underground wires, two hundred and nineteen (219) applications for permits were approved by the Chief for underground electrical companies to open the streets for the introduction of their services.

Number of Telegraph and Telephone Messages and Alarms of Fire.

The value of the Police Telegraph may be seen from the fact that two hundred and sixty-five thousand three hundred and eight (265,308) messages were transmitted over the wires, being an increase of three thousand five hundred and thirty-four (3,534) over last year; a synopsis of the work by districts may be seen in the tabulated statement given.

The total of eight thousand seven hundred and twenty (8,720) telephone messages show an increase of five thousand five hundred and thirty-four (5,534) over 1887. Forty-four thousand five hundred and thirty (44,530) connections were made by the operators working the telephone switchboard. One hundred and four (104) messages were transmitted over the wires connecting this office with the Bureau of Gas, relating principally to such matters as might require their immediate attention.

There were five hundred and seventeen (517) alarms of fire transmitted over the wires. First alarms, five hundred and two (502); second alarms, fifteen (15); a decrease of fourteen (14) from 1887.

Eight hundred and sixty-eight thousand and fourteen (868,014) calls were made over the Police Signal and Telephone System during the year, eight hundred and twenty-nine thousand five hundred and sixty-eight (829,568) of which were for telephone service, twenty-three thousand nine hundred and thirty-seven (23,937) for wagon calls, and fourteen

thousand five hundred and nine (14,509) reports from private institutions using the service. A summary of the twenty-three thousand nine hundred and thirty-seven (23,937) calls made for the wagons shows fifteen thousand four hundred and fifty-three (15,453) for the conveyance of prisoners, two thousand five hundred and seventy-five (2,575) for the conveyance of injured persons, two hundred and ninety-four (294) for the conveyance of officers to fires, and five thousand six hundred and fifteen (5,615) miscellaneous.

The Bureau had in use at the expiration of the year

- 40 Police dial instruments.
- 63 Alarm instruments, located in engine houses, depots and factories, nine (9) of which are private.
- 496 Fire signal boxes, twenty-eight (28) of which are private.
- 60 Setts bells, relays and keys devoted to the Fire Signal and Telephone Service.
- 331 Telephones.
- 11 Police Patrol, Central Office setts.
- 206 Police Patrol, sentry booths, complete.
- 223 Police Patrol signal boxes.
- 4,649 Poles.
- 795½ Miles of wire, overhead.
- 57½ Miles of wire, underground.

In making repairs to lines owned by the city, ninety-five (95) poles and eight (8) miles of wire were used.

Miscellaneous.

Early in the year an explosion of an accumulation of illuminating gas occurred in the city conduit at Broad and Barclay streets; the fact of the explosion occurring at the noon test of the circuits made by the company using the cables for street lighting, and from the expression let drop by one of their representatives who made the test, they must have given the cable the severest trial possible for it to receive with a ground on the circuit. The party making the test drew an arc from six (6) to eight (8) inches in length; the entire circuit so formed finding no means of escape, after the break, punctured the insulation of the cable, forming an arc, thus igniting the gas, causing it to explode; in order to avoid the accumulation of gas in the future, the iron posts supporting the lamps are prepared with a view toward ventilating the conduit.

On several different occasions during the year the city's electrical service, unprotected by our system of fusible strips, have suffered from the effect of contact with electric light circuits; in no instance was it the fault of the service as constructed by this Bureau, but from the breaking of wires from the house tops, and falling across the wires on the poles, or from the sagging of the heavy electric light wires, where they cross streets above the city's wires. The office of the Postal Telegraph Company, northeast corner Third and Chestnut streets, was the principal sufferer during the year from this cause, a contact with an electric wire resulting in a total destruction of their main office.

The heavy storm of wind and snow of March 11th and 12th resulted in the almost entire suspension of telegraph and telephone business in this city, while the municipal electrical service, with the exception of those wires placed underground, suffered along with the rest, it was not damaged to the extent of those of other corporations, as within thirty-six (36) hours of the cessation of the storm our wires were in a working condition; a frequent re-occurrence of such storms as this would cause those who are averse to the placing of their wires underground to think better of it, and have them placed out of the way of the elements; as before stated it was the intention of the Bureau to place a number of the circuits underground before the end of the coming year, to avoid as much as possible a repetition of such destructive action to its plant.

The change of the grade of Church street, crossing the Pennsylvania Railroad at Frankford, necessitated the reconstructing of the city's pole lines at that point.

As a general suspension of all electrical construction it seems to fall to the lot of this Bureau to clear away such dead wires, &c., relating to overhead construction as may have been left behind, or that have been abandoned, and for which no owner can be found; in the taking down of the old hotel at Fifth and Chestnut streets a number of wires were cut away from its roof proving dangerous to travel; complaint being received of their hanging in the street, the men of this Bureau were sent to clear them away. Complaints of a like nature are received with frequency; and only prompt attention from the Bureau prevents injury to persons or property, and the possibility of a law-suit with the city from such damages. In order to clear away as many of the abandoned wires and

fixtures as possible I notified the bondsmen of the Clay Commercial and Baxter Telephone Companies virtually out of existence, to remove all of their wires from the poles and house tops; an order promptly complied with by the Clay Company, but as yet the Baxter have taken no action toward their removal, the wires of this company still remain as a menace to the firemen in the discharge of their duties; the prompt attention given the matter by the Clay Commercial Company caused the removal of a large number of the abandoned telephone wires hanging about on house tops and poles.

Under instructions from you, I have inspected the electric light wiring of a number of theatres and amusement halls, and directed such changes as, in my judgment, were considered an additional element of safety toward the amusement seeking public.

The Bureau has on hand a large amount of old fire alarm boxes, engine house gongs and other instruments, which I would suggest be disposed of at public sale, as they are of no further use to the city.

Supplies, Repairs and Maintenance.

The amount expended for supplies, repairs and maintenance was nine thousand nine hundred and ninety-nine (9,999) dollars and twenty-four (24) cents, as follows:

227 poles.....	\$1,164 75
2,000 insulators.....	60 00
506 cross arms.....	197 34
2,790 locust pins.....	69 75
Copper wire.....	193 00
Other supplies.....	2,602 13
* Wages.....	3,664 48
Hauling	567 00
Carpenter work.....	83 63
Incidental expenses.....	1,397 16
	\$9,999 24

Extension and Improvement.

The amount expended for the extension and improvement of the lines and purchase of instruments was nine thousand seven hundred and thirty-five (9,735) dollars and forty-four (44) cents, as follows :

161 poles.....	\$817 25
1,000 insulators.....	30 00
505 cross arms.....	161 60
5,210 locust pins.....	130 25
30 miles of iron wire.....	457 36
40 signal boxes.....	5,000 00
Copper wire.....	63 68
Other supplies.....	79 94
Wages.....	2,564 36
Hauling	404 00
Incidental expenses.....	45 00
	\$9,735 44

Underground.

The amount expended for placing the wires underground was eight thousand two hundred and ninety-four (8,294) dollars and seventy (70) cents, as follows ;

Cables.....	\$204 00
Man-hole covers.....	883 13
Creosoted lumber.....	3,205 65
Iron poles.....	315 00
Terminal boxes.....	33 50
Labor.....	2,730 17
Hauling.....	101 25
Bricks	182 40
Other supplies.....	294 73
Carpenter work.....	804 87
Incidental expenses.....	40 00
	\$8,294 70

Police Signal and Telephone Service.

The amount expended for the extension of the Police Signal and Telephone service was nine thousand nine hundred and seventy-four (9,974) dollars and nine (9) cents, as follows :

76 poles.....	\$304 00
1,000 insulators.....	30 00
25 miles iron wire.....	379 19
1,008 feet kerite wire.....	35 28
36 patrol houses.....	7,200 00
Other supplies.....	286 53
Labor.....	1,430 84
Hauling.....	308 25
	\$9,974 09

In conclusion, allow me to express my thanks to you and his Honor, the Mayor, for the valuable assistance rendered, and to my assistant, clerk, and other employees in the prompt and efficient manner in which they have handled the ever increasing duties entailed on them by the numerous improvements and extensions to the various services under the control of the Bureau.

Very respectfully,

D. R. WALKER,

Chief.

Summary of the Operations of the Police Telegraph during the year 1888.

DISTRICTS.	Whole No. of messages.	Received.	Sent.	Coroner notified.	Officers summoned to the Court and Grand Jury.	Relating to fires.	Description of.				Restored to friends & owners.				Miscellaneous.	SUB-DIVISIONS.												
							Stolen property.	Criminals.	Missing persons.	Lost children.	Missing persons.	Lost children.	Boys.	Girls.		Horses.	Mules.	Cattle.	Sheep.	Carriages.	Wagons.	Carts.	Drays.	Push-carts.	Sleighs.			
First.....	6,474	3,142	3,332	28	79	467	336	729	378	158	113	40	33	2,412	4,062	32	10	17	73	40	32	7	1	3	17	9	4	4
Second.....	16,548	8,522	8,026	70	834	606	624	1,115	758	502	27	363	47	4,998	11,550	19	17	92	166	45	6	1	3	33	4	7	3	3
Third.....	19,421	10,316	9,105	22	231	640	1,071	836	969	248	10	143	45	4,148	15,273	7	8	39	51	35	5	2	2	4	7	1	1	1
Fourth.....	7,898	4,664	2,734	24	61	511	264	721	389	69	1	69	12	2,118	5,280	.....	1	3	38	81	10	2	1	7	19	3	1	1
Fifth.....	7,179	3,397	3,782	27	119	498	377	785	424	71	4	71	21	2,415	4,764	.....	1	3	38	13	6	2	1	8	10	6	4	4
Sixth.....	6,071	3,053	3,018	12	134	473	223	655	337	52	19	52	19	1,994	4,077	18	6	36	38	16	18	1	3	10	6	4	4	4
Seventh.....	6,682	3,111	3,571	34	92	512	350	672	449	117	5	117	11	2,373	4,309	1	4	73	44	9	2	.....	3	4	2	2	2	2
Eighth.....	6,136	3,237	2,899	29	76	540	291	809	388	115	12	104	17	2,391	3,745	9	8	58	46	13	4	.....	3	4	2	1	1	1
Ninth.....	8,005	4,073	3,932	33	46	542	407	713	1,037	219	51	77	23	1,631	4,842	40	15	129	91	24	.....	2	8	18	2	1	1	1
Tenth.....	14,860	7,052	7,058	71	212	635	677	416	1,635	655	75	220	26	2,648	10,212	60	15	129	91	24	.....	2	8	18	2	1	1	1
Eleventh.....	6,300	2,964	2,336	23	21	498	870	651	664	187	7	89	7	2,521	3,779	4	3	64	25	4	1	2	.....	1	1	1	1	1
Twelfth.....	6,464	3,153	3,311	36	35	518	294	736	427	304	11	116	6	2,485	3,779	8	3	75	41	5	.....	1	.....	.....	.....	.....	.....	.....
Thirteenth.....	5,786	2,752	3,034	30	43	500	821	697	652	2	22	15	12	2,298	3,458	19	3	12	4	9	.....	3	5	.....	.....	.....	.....	.....
Fourteenth.....	12,322	6,700	5,623	28	45	567	376	1,711	451	37	1	16	22	2,719	9,604	1	.....	12	4	27	4	2	2	.....	.....	.....	.....	.....
Fifteenth.....	7,077	3,895	3,182	28	22	487	361	789	451	9	12	9	40	2,218	4,859	9	3	7	38	31	3	1	20	3	11	2	2	2
Sixteenth.....	6,600	2,967	3,633	47	69	492	430	1,233	745	109	14	109	55	3,209	3,391	8	6	71	38	31	3	1	20	3	11	2	2	2
Seventeenth.....	8,440	4,083	4,347	34	86	504	352	634	350	167	4	167	17	3,641	4,799	96	18	106	61	26	1	25	1	10	3	1	1	1
Eighteenth.....	6,066	3,131	3,375	47	97	514	484	357	561	239	5	256	13	3,030	4,182	1	3	106	61	15	2	.....	10	2	.....	.....	.....	.....
Nineteenth.....	7,263	3,709	3,554	27	218	484	357	561	239	10	5	256	13	3,030	4,233	3	2	156	100	11	2	.....	10	2	.....	.....	.....	.....
Twentieth.....	14,981	7,745	7,236	26	42	509	309	727	404	129	10	82	14	2,268	12,713	4	6	26	11	3	.....	.....	.....	.....	.....	.....	.....	.....
Twenty-first.....	13,578	7,043	6,530	43	84	518	348	787	419	129	93	29	256	2,566	11,012	6	4	75	42	62	8	23	7	12	7	3	2	2
Twenty-second.....	7,653	3,634	4,019	25	57	541	316	821	602	257	12	115	45	2,518	4,847	8	4	87	42	62	8	23	7	12	7	3	2	2
Twenty-third.....	8,073	3,262	3,811	34	62	515	359	885	507	64	2	64	20	2,694	5,555	1	1	74	32	14	3	3	3	2	.....	.....	.....	.....
Twenty-fourth.....	13,674	7,358	6,316	28	120	521	345	811	645	98	4	106	15	2,694	10,980	2	2	74	32	13	1	1	3	3	2	.....	.....	.....
Twenty-fifth.....	8,741	2,577	1,164	6	.....	439	311	778	443	.....	.....	.....	.....	1,999	10,980	2	2	74	32	13	1	1	3	3	2	.....	.....	.....
Roxborough.....	3,874	2,610	1,264	.....	.....	492	311	726	607	.....	.....	.....	.....	1,742	10,980	2	2	74	32	13	1	1	3	3	2	.....	.....	.....
Chestnut Hill.....	843	492	351	1	6	9	8	2	2	.....	.....	.....	.....	1,742	10,980	2	2	74	32	13	1	1	3	3	2	.....	.....	.....
Olney.....	1,813	1,155	658	.....	.....	244	87	237	143	.....	.....	.....	.....	801	10,980	2	2	74	32	13	1	1	3	3	2	.....	.....	.....
Holmesburg.....	5,979	3,539	2,440	11	4	486	373	856	455	4	2	4	7	2,202	3,777	1	1	3	1	2	.....	.....	.....	.....	.....	.....	.....	.....
Tecony.....	7,750	3,617	3,133	8	3	484	336	931	425	.....	.....	.....	.....	2,195	4,555	.....	.....	6	.....	5	.....	.....	.....	.....	.....	.....	.....	.....
Falls of Schuylkill.....	3,755	2,738	1,017	8	8	492	333	733	425	.....	.....	.....	.....	2,308	1,447	.....	.....	1	.....	9	.....	.....	.....	.....	.....	.....	.....	.....
Bridenburg.....	7,315	3,945	3,370	13	17	508	327	762	426	17	9	13	24	2,121	5,194	5	2	9	1	15	.....	.....	.....	.....	.....	.....	.....	.....
Nicetown.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Totals.....	265,308	139,179	126,129	871	2,980	16,104	12,208	24,257	19,302	4,372	517	2,838	831	84,763	180,548	862	165	1,777	1,061	554	69	183	20	54	224	49	3	51

Police Signal and Telephone Service for the year 1888.

TELEPHONE CALLS.

MONTHS.	No. 1 Patrol.	No. 2 Patrol.	No. 3 Patrol.	No. 4 Patrol.	No. 5 Patrol.	No. 6 Patrol.	No. 7 Patrol.	No. 8 Patrol.	No. 9 Patrol, 9th District.	No. 9 Patrol, 28d District.	No. 10 Patrol.	Total Tele- phone Calls.
January.....	9,113	6,329	8,968	6,841	10,780	5,877	8,212	.....	.....	.....	1,805	57,275
February.....	8,506	6,838	8,325	6,662	10,255	5,384	8,716	.....	.....	3,791	1,231	59,708
March.....	6,527	6,093	8,374	5,752	11,611	5,149	9,984	.....	4,742	4,855	1,302	63,889
April.....	8,314	6,828	8,411	7,290	10,130	6,326	9,468	.....	4,580	4,748	1,248	67,338
May.....	8,766	7,184	8,586	8,051	10,185	6,713	9,967	2,742	4,782	4,833	1,330	73,089
June.....	7,479	6,785	8,238	7,578	9,579	6,183	9,967	2,892	4,578	4,770	1,259	69,308
July.....	7,162	6,499	8,137	7,431	9,602	5,882	10,097	2,878	4,764	4,885	1,336	68,673
August.....	7,008	6,623	7,533	7,766	9,590	5,852	9,792	2,988	4,746	4,852	1,328	68,088
September.....	7,448	6,532	7,827	8,509	9,311	6,267	10,314	2,887	4,586	4,671	1,255	69,907
October.....	7,950	7,285	8,414	8,984	9,986	6,602	9,767	2,986	4,755	4,971	2,908	74,553
November.....	7,648	7,170	7,992	6,499	9,611	6,236	8,692	3,139	6,716	5,877	2,911	71,991
December.....	7,907	8,443	8,683	8,783	9,781	7,418	9,119	6,132	10,232	6,601	2,895	86,049
Total.....	93,826	82,609	95,486	90,066	130,371	78,839	114,085	28,644	54,431	53,849	20,303	825,568

Police Signal and Telephone Service for the year 1888—Continued.

MONTHS.	WAGON CALLS.										BANK CALLS.							Total Telephone, Wagon and Bank Calls.			
	No. 1 Patrol.	No. 2 Patrol.	No. 3 Patrol.	No. 4 Patrol.	No. 5 Patrol.	No. 6 Patrol.	No. 7 Patrol.	No. 8 Patrol.	No. 9 Patrol.	No. 10 Patrol.	Total Wagon Calls.	Republic.	No. 1 Patrol.	Guarantee Trust.	Centennial.	Market St.	Third National.		South Western.	North Western.	Total Bank Calls.
January.	773	136	88	199	206	123	205	.....	.....	.....	1,735	125	160	187	.....	.....	.....	480	90	1,042	60,052
February....	589	133	115	170	190	142	240	.....	.....	.....	1,679	138	151	174	.....	.....	.....	446	174	1,088	62,370
March.....	534	133	144	153	243	131	258	.....	.....	.....	1,673	95	124	186	23	.....	.....	474	186	1,088	66,650
April.....	621	191	164	217	236	191	247	.....	.....	.....	2,120	121	154	180	59	.....	.....	470	180	1,164	70,622
May.....	751	189	176	184	326	210	328	.....	.....	.....	2,504	125	159	186	83	.....	.....	484	186	1,223	76,816
June.....	497	168	223	157	218	177	280	.....	.....	.....	1,965	122	153	181	59	.....	.....	470	180	1,165	72,438
July.....	472	157	188	175	220	183	296	.....	.....	.....	1,940	124	161	187	54	.....	.....	494	186	1,206	71,819
August.....	613	185	211	190	213	209	287	.....	.....	.....	2,236	127	161	186	62	.....	.....	483	186	1,235	71,559
September...	603	209	199	203	239	187	306	.....	.....	.....	2,311	120	163	180	59	.....	.....	462	180	1,317	73,235
October.....	574	127	131	194	232	198	273	.....	.....	.....	2,009	121	141	186	62	.....	.....	485	186	1,335	77,897
November...	411	108	98	176	236	149	257	.....	.....	.....	1,704	118	152	180	54	.....	.....	470	180	1,287	74,982
December...	467	129	150	202	255	157	300	.....	.....	.....	2,161	124	160	186	62	.....	.....	494	183	1,364	89,574
Total.....	6,905	1,365	1,387	2,225	2,814	2,062	3,277	596	874	1,368	74	23,987	1,460	1,389	2,199	577	625	5,712	2,097	14,509	868,014

Summary of Underground Conduits, 1888.

Names of Companies, Firms, and Corporations.	No. of Conduits.	Length in feet.	Number of Ducts.	Length in feet.	Miles of Ducts.
American Telephone and Telegraph Co.....	42	169,079	375	1,329,747	270.7
Bell Telephone Co. of Philadelphia.....	34	80,714	1,832	549,094.	103.9
Drexel & Co.....	1	559			
Edison Electric Light Co.....	245	44,339	253	183,900	26.3
Henry C. Gibson, <i>et al</i>	7	24,372			
Keystone Light and Power Co.....	20	5,443			
Penn Electric Light Co.....	37	55,769	228	450,571	85.2
Phila., Reading and Pottsville Telegraph Co.....	2	376			
Strawbridge & Clothier.....	1	45			
Underground Electric Light and Power Co.....	4	6,209			
Girard Estate.....	1	5,250	4	21,000	3.9
City.....	9	31,110	68	135,008	25.5
Total.....	403	373,265	2,760	2,624,320	515.5

Summary of the Operations of the Fire Telegraph, 1888.

Months.	First alarms sounded.	Second alarms.	Third alarms.	Fourth alarms.	False alarms.	Totals.
January.....	43	2				45
February.....	47					47
March.....	44	4				48
April.....	33	1				34
May.....	56	3				59
June.....	50	1				51
July.....	53	1				54
August.....	31					31
September.....	26					26
October.....	35					35
November.....	23	1				29
December.....	56	2				58
Totals.....	502	15				517

Showing number of Alarms from each Box during the year 1888.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Total.
1	1	74	1	171	1	258	1	353	.....	438	1	584	.....	628	1	724	.....	
2	1	75	1	172	.....	259	4	354	1	439	1	585	.....	629	.....	725	1	
3	6	76	1	173	1	261	.....	356	1	451	.....	586	.....	631	.....	726	.....	
4	2	77	4	174	3	262	.....	357	.....	452	.....	587	1	632	2	727	1	
5	1	78	.....	175	.....	263	2	358	1	453	3	588	.....	634	.....	728	.....	
6	.....	79	.....	176	1	264	2	359	.....	454	.....	589	.....	635	.....	729	.....	
7	4	80	3	177	.....	265	.....	361	4	456	2	591	.....	636	.....	731	1	
8	1	81	.....	178	1	267	.....	362	4	457	2	592	.....	637	1	732	1	
9	1	82	.....	179	1	268	2	363	3	458	1	593	.....	638	.....	733	1	
10	12	83	1	180	3	269	.....	364	.....	459	2	594	.....	639	1	734	1	
11	86	84	.....	181	.....	271	.....	365	.....	461	.....	595	.....	641	.....	735	4	
12	87	85	1	182	.....	272	1	367	1	462	.....	596	.....	642	.....	736	.....	
13	.....	86	1	183	.....	273	.....	368	4	463	2	597	.....	643	1	737	.....	
14	1	87	.....	184	3	274	.....	369	.....	464	.....	598	.....	644	.....	738	.....	
15	2	88	3	185	.....	275	.....	371	1	465	.....	599	.....	645	1	739	.....	
16	2	89	.....	186	.....	276	.....	372	.....	467	1	601	.....	646	.....	741	.....	
17	.....	90	.....	187	1	277	.....	373	.....	468	.....	602	.....	647	1	742	.....	
18	.....	91	.....	188	3	278	.....	374	1	469	.....	603	.....	648	.....	743	.....	
19	2	92	2	189	2	279	1	375	.....	471	1	604	.....	649	.....	744	.....	
20	.....	93	.....	190	3	281	.....	376	4	472	2	605	.....	651	.....	745	.....	
21	2	94	.....	191	2	282	.....	377	.....	473	1	606	.....	652	1	746	.....	
22	1	95	.....	192	.....	283	2	378	.....	474	3	607	.....	653	.....	747	.....	
23	1	96	.....	193	1	284	.....	379	1	475	1	608	.....	654	.....	748	.....	
24	2	97	.....	194	2	285	.....	381	.....	476	2	609	.....	655	.....	749	.....	
25	3	98	1	195	1	286	.....	382	5	477	.....	610	.....	656	.....	751	1	
26	2	99	1	196	1	287	.....	383	2	478	.....	611	.....	657	.....	752	2	
27	1	100	1	197	1	288	.....	384	4	479	.....	612	.....	658	.....	753	1	
28	2	101	1	198	.....	289	.....	385	.....	481	.....	613	.....	659	.....	754	.....	
29	.....	102	2	199	.....	290	.....	386	.....	482	1	614	.....	660	.....	755	.....	
30	.....	103	.....	200	.....	291	.....	387	.....	483	2	615	.....	661	.....	756	1	
31	5	104	1	201	.....	292	.....	388	.....	484	.....	616	.....	662	.....	757	.....	
32	.....	105	.....	202	.....	293	1	389	2	485	2	617	.....	663	.....	758	.....	
33	.....	106	.....	203	.....	294	1	390	.....	486	.....	618	.....	664	.....	759	.....	
34	.....	107	.....	204	.....	295	1	391	1	487	2	619	.....	665	.....	761	.....	
35	1	108	.....	205	.....	296	1	392	2	488	.....	620	.....	666	.....	762	.....	
36	2	109	.....	206	.....	297	.....	393	2	489	1	621	.....	667	.....	763	1	
37	2	110	.....	207	.....	298	.....	394	2	490	.....	622	.....	668	.....	764	.....	
38	.....	111	.....	208	.....	299	.....	395	.....	491	.....	623	.....	669	.....	765	.....	
39	6	112	.....	209	.....	300	.....	396	1	492	.....	624	.....	670	.....	766	.....	
40	.....	113	.....	210	.....	301	.....	397	1	493	1	625	.....	671	.....	767	.....	
41	.....	114	.....	211	.....	302	.....	398	.....	494	3	626	.....	672	.....	768	.....	
42	4	115	.....	212	.....	303	.....	399	.....	495	1	627	.....	673	.....	769	.....	
43	2	116	.....	213	.....	304	.....	400	.....	496	.....	628	.....	674	.....	770	.....	
44	.....	117	.....	214	.....	305	.....	401	.....	497	.....	629	.....	675	.....	771	.....	
45	2	118	.....	215	.....	306	.....	402	.....	498	.....	630	.....	676	.....	772	.....	
46	.....	119	.....	216	.....	307	.....	403	.....	499	.....	631	.....	677	.....	773	.....	
47	.....	120	.....	217	.....	308	.....	404	.....	500	.....	632	.....	678	.....	774	.....	
48	.....	121	.....	218	.....	309	.....	405	.....	501	.....	633	.....	679	.....	775	.....	
49	4	122	.....	219	.....	310	.....	406	.....	502	.....	634	.....	680	.....	776	.....	
50	1	123	.....	220	.....	311	.....	407	.....	503	.....	635	.....	681	.....	777	.....	
51	1	124	.....	221	.....	312	.....	408	.....	504	.....	636	.....	682	.....	778	.....	
52	2	125	.....	222	.....	313	.....	409	.....	505	.....	637	.....	683	.....	779	.....	
53	1	126	.....	223	.....	314	.....	410	.....	506	.....	638	.....	684	.....	780	.....	
54	.....	127	.....	224	.....	315	.....	411	.....	507	.....	639	.....	685	.....	781	.....	
55	.....	128	.....	225	.....	316	.....	412	.....	508	.....	640	.....	686	.....	782	.....	
56	.....	129	.....	226	.....	317	6	413	.....	509	.....	641	.....	687	.....	783	.....	
57	.....	130	.....	227	.....	318	.....	414	.....	510	.....	642	.....	688	.....	784	.....	
58	1	131	.....	228	.....	319	.....	415	.....	511	.....	643	.....	689	.....	785	.....	
59	.....	132	.....	229	.....	320	.....	416	.....	512	.....	644	.....	690	.....	786	.....	
60	.....	133	.....	230	.....	321	.....	417	.....	513	.....	645	.....	691	.....	787	.....	
61	.....	134	.....	231	.....	322	.....	418	.....	514	.....	646	.....	692	.....	788	.....	
62	.....	135	.....	232	.....	323	.....	419	.....	515	.....	647	.....	693	.....	789	.....	
63	1	136	.....	233	.....	324	.....	420	.....	516	.....	648	.....	694	.....	790	.....	
64	2	137	.....	234	.....	325	.....	421	.....	517	.....	649	.....	695	.....	791	.....	
65	1	138	.....	235	.....	326	.....	422	.....	518	.....	650	.....	696	.....	792	.....	
66	.....	139	.....	236	.....	327	.....	423	.....	519	.....	651	.....	697	.....	793	.....	
67	3	140	.....	237	.....	328	3	424	.....	520	.....	652	.....	698	.....	794	.....	
68	1	141	.....	238	.....	329	.....	425	.....	521	.....	653	.....	699	.....	795	.....	
69	.....	142	.....	239	.....	330	.....	426	.....	522	.....	654	.....	700	.....	796	.....	
70	.....	143	.....	240	.....	331	.....	427	.....	523	.....	655	.....	701	.....	797	.....	
71	1	144	.....	241	.....	332	.....	428	.....	524	.....	656	.....	702	.....	.....	.....	
72	1	145	.....	242	.....	333	.....	429	.....	525	.....	657	.....	703	.....	.....	.....	
73	.....	146	.....	243	.....	334	.....	430	.....	526	.....	658	.....	704	.....	.....	.....	
74	.....	147	.....	244	.....	335	.....	431	.....	527	.....	659	.....	705	.....	.....	.....	
75	.....	148	.....	245	.....	336	.....	432	.....	528	.....	660	.....	706	.....	.....	.....	
76	.....	149	.....	246	.....	337	.....	433	.....	529	.....	661	.....	707	.....	.....	.....	
77	.....	150	.....	247	.....	338	.....	434	.....	530	.....	662	.....	708	.....	.....	.....	
78	.....	151	.....	248	.....	339	.....	435	.....	531	.....	663	.....	709	.....	.....	.....	
79	.....	152	.....	249	.....	340	.....	436	.....	532	.....	664	.....	710	.....	.....	.....	
80	.....	153	.....	250	.....	341	.....	437	.....	533	.....	665	.....	711	.....	.....	.....	
81	.....	154	.....	251	.....	342	.....	438	.....	534	.....	666	.....	712	.....	.....	.....	
82	.....	155	.....	252	.....	343	.....	439	.....	535	.....	667	.....	713	.....	.....	.....	
83	.....	156	.....	253	.....	344	.....	440	.....	536	.....	668	.....	714	.....	.....	.....	
84	.....	157	.....	254	.....	345	.....	441	.....	537	.....	669	.....	715	.....	.....	.....	
85	.....	158	.....	255	.....	346	.....	442	.....	538	.....	670	.....	716	.....	.....	.....	
86	.....	159	.....	256	.....	347	.....	443	.....	539	.....	671	.....	717	.....	.....	.....	
87	.....	160	.....	257	.....	348	.....	444	.....	540	.....	672	.....	718	.....	.....	.....	
88	.....	161	.....	258	.....	349	.....	445	.....	541	.....	673	.....	719	.....	.....	.....	
89	.....	162	.....	259	.....	350	.....	446	.....	542	.....	674	.....	720	.....	.....	.....	
90	.....	163	.....	260	.....	351	.....	447	.....	543	.....	675	.....	721	.....	.....	.....	
91	.....	164	.....	261	.....	352	.....	448	.....	544	.....	676	.....	722	.....	.....	.....	
92	.....	165	.....	262	.....	353	.....	449	.....	545	.....	677	.....	723	.....	.....	.....	
93	.....	166	.....	263	.....	354	.....	450	.....	546	.....	678	.....	724	.....	.....	.....	
94	.....	167	.....	264	.....	355	.....	451	.....	547	.....	679	.....	725	.....	.....	.....</	

Showing Number of Alarms for each Hour of the Day for the Year.

1888.	A. M.												P. M.												Total Day Alarms.	A. M.												P. M.												Total Night Alarms.	Total.
	A. M.						P. M.						A. M.						P. M.							A. M.						P. M.																			
	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5		6	7	8	9	10	11	12	1	2	3	4	5														
January.....	2	2	3	1	1			1	2	2	2		1	17	5	2	3	3	1	4	2	1		4	3		28	45																							
February.....	2	1	1	2	2	1	3	1	3	1	.....	5	22	1	4	5	.....	.....	3	3	2	3	1	1	2	25	47																								
March.....	2	2	1	2	1	1	1	2	2	2	.....	2	18	2	4	3	3	1	4	5	2	3	2	1	.....	30	48																								
April.....	.....	1	.....	3	.....	.....	1	4	2	3	1	1	16	2	2	2	2	1	3	.....	3	1	.....	2	.....	18	34																								
May.....	1	5	3	4	2	3	3	1	3	3	1	6	35	1	3	3	.....	2	2	4	2	2	.....	5	.....	24	59																								
June.....	.....	1	3	3	2	.....	1	2	5	3	.....	2	22	6	.....	3	3	3	1	3	.....	2	3	3	2	29	51																								
July.....	1	1	5	3	1	1	3	2	4	2	3	2	28	1	2	3	2	2	4	2	2	4	4	.....	.....	26	54																								
August.....	.....	.....	2	3	1	2	3	1	1	.....	.....	.....	13	.....	.....	3	1	2	2	2	2	.....	4	.....	2	18	31																								
September.....	2	.....	1	1	.....	.....	2	.....	2	.....	1	1	8	1	3	3	1	3	.....	2	2	2	1	.....	.....	18	26																								
October.....	1	1	2	4	2	2	1	.....	.....	.....	3	16	.....	.....	1	3	4	2	1	1	1	1	1	1	3	19	35																								
November.....	.....	1	.....	2	1	1	2	2	.....	1	2	12	3	1	2	1	1	2	2	1	.....	.....	2	2	17	29	53																								
December.....	.....	.....	.....	1	3	2	1	.....	2	1	4	5	19	2	5	1	3	4	4	3	2	7	4	1	3	39	58																								
Total.....	11	13	21	25	19	13	20	18	23	17	11	30	236	24	27	34	23	23	30	29	20	25	24	19	14	291	517																								

Return of license charges for attachments to city poles, maintenance of poles, erection of poles, and mileage of wires over-head, for the year 1888.

	Attachments.		Maintenance of poles.		Erection of poles.		Wire on city poles.		Wire on other poles and buildings.		Total.		Total charges.
	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	
American District Telegraph Company.....	\$158 50	.....	.....	\$12 00	.....	.....	\$25 00	.....	\$295 00	.....	\$183 50	\$307 00	\$490 50
American Rapid Telegraph Company.....	246 00	.....	.....	120 00	.....	.....	40 00	.....	60 00	.....	286 00	180 00	466 00
American Union Telegraph Company.....	.....	.....	.....	10 00	.....	.....	.....	.....	.....	.....	.....	10 00	10 00
American Co. of Phila. for Henry Bower & Son)	104 00	.....	.....	.....	.....	.....	17 50	.....	.....	.....	121 50	22 50	144 00
Atlantic and Pacific Telegraph Company.....	158 00	.....	.....	303 00	.....	.....	7 50	.....	.....	.....	65 50	665 50	731 00
Atlantic Refining Company.....	158 00	.....	\$5 00	.....	.....	.....	25 00	.....	\$80 00	.....	218 00	.....	218 00
Baker, Adams & Co.....	71 00	.....	.....	.....	.....	.....	10 00	.....	.....	.....	31 00	.....	81 00
Baltimore and Ohio Telegraph Company.....	277 00	.....	.....	33 00	.....	.....	57 50	.....	.....	.....	334 50	204 00	538 50
Bankers and Merchants Telegraph Company.....	.....	.....	.....	551 00	.....	.....	.....	.....	.....	.....	.....	1,476 00	1,476 00
Bankers, George E.....	25 00	.....	.....	.....	.....	.....	5 00	.....	.....	.....	30 00	.....	30 00
Bell Telephone Company of Philadelphia.....	1,500 50	.....	.....	72 00	\$190 00	.....	282 50	.....	5,292 50	.....	1,943 00	5,364 50	7,307 50
Bridgport Manufacturing Company.....	790 00	\$89 00	.....	.....	.....	.....	250 00	\$17 50	.....	.....	2,155 00	116 50	2,915 00
Brush Electric Light Company.....	56 00	.....	.....	475 00	1,115 00	.....	10 00	.....	.....	.....	65 00	.....	65 00
Elkinton, Joseph S. and Thomas.....	.....	.....	.....	.....	40 00	.....	.....	.....	.....	.....	.....	.....	89 00
Frankford Electric Light and Power Company.....	.....	.....	39 00	.....	110 00	.....	.....	.....	10 00	.....	.....	112 00	222 00
German town Electric Light Company.....	45 00	.....	.....	.....	.....	.....	7 50	.....	17 50	.....	70 00	.....	70 00
Gilard Point Storage Company.....	112 50	.....	.....	.....	.....	.....	26 00	.....	22 50	.....	204 00	.....	204 00
Harrison Brothers & Co.....	242 00	.....	44 00	.....	.....	.....	62 50	.....	.....	.....	294 50	.....	294 50
Knickerbocker Ice Company.....	20 00	.....	.....	.....	.....	.....	5 00	.....	.....	.....	25 00	.....	25 00
Knickerbocker, J. H. & Co.....	.....	.....	.....	550 00	.....	.....	.....	.....	.....	.....	.....	1,505 00	1,505 00
Mutual Union Telegraph Company.....	283 00	.....	179 00	.....	\$360 00	.....	80 00	.....	10 00	.....	912 00	.....	912 00
Northern Electric Light and Power Company.....	30 50	.....	.....	.....	.....	.....	15 00	.....	.....	.....	50 50	.....	50 50
Peerless Brick Company.....	32 50	.....	.....	.....	.....	.....	5 00	.....	.....	.....	307 00	.....	307 00
Pennsylvania Railroad Company.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12 50
Peoples Telephone Company.....	139 50	.....	.....	181 00	175 00	.....	35 00	.....	65 00	.....	349 50	246 00	595 50
Philadelphia Electric Lighting Company.....	70 00	.....	.....	526 00	.....	.....	12 50	.....	485 00	.....	82 50	961 00	1,043 50
Philadelphia Local Telegraph Company.....	207 00	.....	.....	.....	.....	.....	35 00	.....	125 00	.....	242 00	125 00	367 00
Philadelphia, Reading and Pottsville Tel. Co.....	336 50	.....	231 00	.....	.....	.....	57 50	.....	305 00	.....	930 00	.....	930 00
United States Electric Light Company.....	344 50	.....	.....	282 00	345 00	.....	105 00	.....	125 00	.....	794 50	407 00	1,201 50
Western Union Telegraph Company.....	26 50	.....	.....	1,338 00	.....	.....	5 00	.....	1,920 00	.....	31 50	3,258 50	3,289 50
Wissahickon Electric Light Company.....	25 00	.....	.....	16 00	180 00	.....	10 00	.....	15 00	.....	215 00	31 00	246 00
Total for 1888.....	\$5,357 50	\$89 00	\$595 00	\$4,577 00	\$2,515 00	\$360 00	\$1,140 00	\$17 50	\$895 00	\$11,057 50	\$10,202 50	\$15,751 00	\$25,953 50
Knickerbocker Ice Company for 1889.....	242 00	.....	.....	.....	.....	.....	62 50	.....	.....	.....	294 50	.....	294 50
Total.....	\$5,599 50	\$89 00	\$595 00	\$4,577 00	\$2,515 00	\$360 00	\$1,192 50	\$17 50	\$895 00	\$11,057 50	\$10,497 50	\$15,751 00	\$26,248 00

Appropriation to the Department of Public Safety (Electrical Bureau), with the Expenditures and Balances, for the year 1888.

Items		Amount appropriat'd.	Amount expended.	Balance.
1	For salary of Chief, \$3,500; manager, \$1,800; clerk, \$1,800; four (4) inspectors, \$1,000 each, and \$40 for uniforms each; fourteen (14) operators, at \$950 each, and \$40 for uniforms each; one (1) foreman, \$900; six (6) linemen, \$800 each; one (1) batteryman, \$900; one (1) assistant batteryman and plumber, \$800; and two (2) janitors, at \$200 each.....	\$32,420 00	\$31,896 48	\$523 52
2	For repairs, instruments, and other supplies.....	10,000 00	9,999 24	76
3	For maintenance and keep of horse and three (3) wagons.....	500 00	500 00	
4	For batteries, acids, and materials.....	4,000 00	3,985 83	14 17
5	For stationery, printing, advertising, and incidentals.....	1,800 00	1,298 94	1 06
6	For painting telegraph poles and patrol boxes.....	1,500 00	1,401 46	98 54
7	For fuel and ice.....	100 00	98 29	1 71
8	For the improvement and extension of the police and fire telegraph: <i>Provided</i> , That no part of this item shall merge at the close of the year 1888..... \$10,000 07 Balance from books of 1887... 505 27	10,505 27	9,735 44	769 83
9	For rental of telephones and purchase of materials and instruments and extension of the lines and hospital service.....	6,200 00	5,985 59	214 41
10	For the extension of the police signal and telephone service.....	10,000 00	9,974 09	25 91
11	For cables, conduits, manholes, posts, mast arms, materials, and labor for underground electrical service; the cost of laying conduits on South Broad street, from the City Hall to Passyunk avenue, to be taken out of this item: <i>Provided</i> , That no part of this item shall merge December 31, 1888..... \$15,000 00 Balance from books of 1887... 399 56	15,399 56	8,294 70	7,104 86
12	For the purpose of completing the station-house for the police signal and telephone service north of Vine street: <i>Provided</i> , No part of this item shall merge December 31, 1887, ordinance December 29, 1887, brought from books of 1887.....	200 00	38 00	164 00
	Totals.....	\$92,124 83	\$83,206 06	\$8,918 77

Number of Miles Overhead and Underground Wires.

Names of companies, firms, and corporations.	Number of miles on city poles.	Number of miles on other poles.	No. of miles on fixtures & buildings.	Total.
American District Telegraph Co.....	11 ¹ / ₂	.....	101 ¹ / ₂	113 ¹ / ₂
American Rapid Telegraph Company	16	20	4	40
American Telephone and Telegraph Company.....	.....	.....	46 ¹ / ₂	46 ¹ / ₂
Ammonia Company of Philadelphia...	7	.....	5 ¹ / ₂	12 ¹ / ₂
Atlantic and Pacific Telegraph Co.....	3	143 ¹ / ₂	1 ¹ / ₂	147 ¹ / ₂
Atlantic Refining Company.....	10	1	12	23
Baeder, Adamson & Co.....	4	.....	.....	4
Baltimore and Ohio Telegraph Co.....	13 ¹ / ₂	.....	26 ¹ / ₂	39 ¹ / ₂
Bankers and Merchants Telegraph Co	.....	351	18	369
Bartol, George E.....	2	.....	.....	2
Bell Telephone Co. of Philadelphia....	101	497	1,252	1,850
Brush Electric Light Company.....	58 ¹ / ₂	77 ¹ / ₂	1 ¹ / ₂	136 ¹ / ₂
Elkinton, Joseph S. & Thomas.....	3 ¹ / ₂	.....	.....	3 ¹ / ₂
Frankford Electric Light and Power Company.....	1 ¹ / ₂	2 ¹ / ₂	1 ¹ / ₂	5 ¹ / ₂
Germantown Electric Light Company	1 ¹ / ₂	7 ¹ / ₂	.....	9 ¹ / ₂
Girard Point Storage Company.....	5	5	.....	10
Harrison Brothers & Co.....	9	7 ¹ / ₂	1 ¹ / ₂	18
Knickerbocker Ice Company.....	21	.....	.....	21
Mutual Union Telegraph Company...	.....	379 ¹ / ₂	2 ¹ / ₂	381 ¹ / ₂
Northern Electric Light and Power Company.....	25	31	.....	56
Peerless Brick Company.....	2	5	.....	7
Pennsylvania Railroad Company.....	2 ¹ / ₂	65 ¹ / ₂	2	70 ¹ / ₂
People's Telephone Company.....	.....	.....	2 ¹ / ₂	2 ¹ / ₂
Philadelphia Electric Lighting Co.....	14 ¹ / ₂	13 ¹ / ₂	1 ¹ / ₂	29 ¹ / ₂
Philadelphia Local Telegraph Co.....	5	48 ¹ / ₂	125	178 ¹ / ₂
Philadelphia Local Telegraph Co.....	13 ¹ / ₂	38 ¹ / ₂	13 ¹ / ₂	65 ¹ / ₂
Philadelphia, Reading and Pottsville Telegraph Company.....	22 ¹ / ₂	123 ¹ / ₂	.....	145 ¹ / ₂
United States Electric Lighting Company of Pennsylvania.....	13 ¹ / ₂	26 ¹ / ₂	1 ¹ / ₂	40 ¹ / ₂
Western Union Telegraph Company..	1 ¹ / ₂	767 ¹ / ₂	.....	768 ¹ / ₂
Wissahickon Electric Light Company	8	2	.....	10
City wires.....	368 ¹ / ₂	2,615 ¹ / ₂	1,617 ¹ / ₂	4,601 ¹ / ₂
Total miles overhead wires.....				5,897 ¹ / ₂
Underground wires.	Electric light wires.	Telegraph and telephone wires.	Total.	
American Telephone & Telegraph Co.....	.....	319 ¹ / ₂	319 ¹ / ₂	
Keystone Electric Light & Power Co.	11 ¹ / ₂	.....	11 ¹ / ₂	
Undergr'd Electric Light & Power Co.	5 ¹ / ₂	.....	5 ¹ / ₂	
Henry C. Gibson <i>et al.</i>.....	.....	365 ¹ / ₂	365 ¹ / ₂	
Brush Electric Light Company.....	1 ¹ / ₂	.....	1 ¹ / ₂	
Edison Electric Light Company.....	75 ¹ / ₂	.....	75 ¹ / ₂	
Girard Estate.....	1 ¹ / ₂	.....	1 ¹ / ₂	
City wires.....	5 ¹ / ₂	41 ¹ / ₂	46 ¹ / ₂	
Total miles underground wires	99 ¹ / ₂	725 ¹ / ₂	825 ¹ / ₂	
Total miles of wires.....				6,322 ¹ / ₂

Summary of Troubles on Fire Telegraph for the year 1888.

MONTHS.	ALARM CIRCUITS.						SIGNAL CIRCUITS.						FIRE TELEPHONE CIRCUITS.						CAUSED BY ELECTRIC LIGHT CONTACTS.				
	Open in street.	Open in fusible strips.	Open in engine-houses.	Open in battery.	Grounds.	Swingers.	Open in street.	Open in fusible strips.	Open in street boxes.	Open in battery.	Grounds.	Swingers.	Open in street.	Open in fusible strips.	Open in engine-houses.	Open in battery.	Grounds.	Swingers.	Alarm circuits opened.	Signal circuits opened.	Fire Tel. circuits opened.	Street boxes burned out.	Fire Tel. ins'ts burned out.
January.....	1	1	1	1	13	11	5	1	.....	.....	64	11	2	2	.....	.....	2	.....	.....	.....	.....	.....	.....
February.....	2	1	1	1	24	16	5	1	.....	.....	51	16	5	2	1	.....	11	.....	.....	.....	.....	.....	.....
March.....	1	1	1	1	54	21	14	7	.....	2	76	21	14	6	6	.....	34	.....	.....	.....	.....	.....	2
April.....	1	1	1	1	7	6	2	.....	.....	.....	43	6	3	4	4	.....	20	.....	.....	.....	.....	.....	.....
May.....	2	8	1	1	18	3	3	18	1	.....	51	6	1	8	.....	.....	3	.....	.....	.....	.....	.....	.....
June.....	1	4	3	1	17	2	2	2	1	.....	65	3	1	2	3	.....	8	.....	.....	.....	.....	.....	.....
July.....	4	10	2	.....	31	2	2	4	.....	1	70	2	1	3	2	.....	13	.....	.....	.....	.....	.....	.....
August.....	3	3	.....	.....	40	8	8	13	1	.....	87	7	1	7	2	.....	6	.....	.....	.....	.....	.....	.....
September.....	2	3	.....	.....	30	3	4	8	.....	2	75	.....	2	6	6	.....	14	.....	.....	.....	.....	.....	.....
October.....	3	.....	.....	.....	38	3	4	9	2	.....	92	11	1	.....	2	.....	8	.....	.....	.....	.....	.....	.....
November.....	1	1	.....	.....	18	3	9	2	2	.....	63	22	.....	.....	2	.....	8	.....	.....	.....	.....	.....	.....
December.....	1	1	.....	.....	26	7	5	4	2	1	52	11	.....	.....	.....	.....	18	.....	.....	.....	.....	.....	.....
Totals.....	11	32	8	7	316	32	63	69	9	7	789	116	31	42	32	3	145	3	5	21	6	6	3
																							1,766

JUN 14 1920

